



Publikationen

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Braet, F., Romani, R., Hofer, F., Kaiser, U. & Egerton, R., Jan. 2025, in: Micron. 188, 4 S., 103727.

Three-dimensional distribution of individual atoms in the channels of beryl

Knez, D., Gspan, C., Simic, N., Mitsche, S., Fitzek, H., Gatterer, K., Wiltsche, H., Kothleitner, G., Grogger, W. & Hofer, F., Dez. 2024, in: Communications Materials. 5, 1, 9 S., 19.

Atom by atom analysis of defect structures in doped STO

Unterleitner, E. M., Knez, D., Kobald, A., Hofer, F. & Kothleitner, G., 2024, S. 89.

Atom by Atom analysis of defect structures in doped STO

Unterleitner, E. M., Knez, D., Kobald, A., Hofer, F. & Kothleitner, G., 2024.

Quantitative Analysis of Individual Atoms in the Channels of Beryl

Knez, D., Gspan, C., Simic, N., Mitsche, S., Fitzek, H. M., Kothleitner, G., Grogger, W. & Hofer, F., 2024.

Three-dimensional distribution of individual atoms in the channels of beryl

Knez, D., Mitsche, S., Kothleitner, G., Grogger, W., Hofer, F., Gspan, C. & Simic, N., 2024, S. 68.

Applying Material Science Principles to Chemical Stability: Modelling Solid State Autoxidation in Mifepristone Containing Different Degrees of Crystal Disorder

Iyer, J., Morgan, L. M., Harrison, P., Davis, A., Ray, A., Mitsche, S., Hofer, F., Saraf, I. & Paudel, A., Sept. 2023, in: Journal of Pharmaceutical Sciences. 112, 9, S. 2463-2482 20 S.

Micro- and nanostructure of additively manufactured, in-situ alloyed, magnetic spinodal $\text{Fe}_{54}\text{Cr}_{31}\text{Co}_{15}$

Mairhofer, T., Arneitz, S., Hofer, F., Sommitsch, C. & Kothleitner, G., 19 Apr. 2023, (Elektronische Veröffentlichung vor Drucklegung.) in: Journal of Materials Science. 58, 16, S. 7119–7135 17 S.

Quantitative Analysis of Individual Atoms in the Channels of Beryl

Knez, D., Gspan, C., Simic, N., Mitsche, S., Fitzek, H. M., Kothleitner, G., Grogger, W. & Hofer, F., 2023, S. 553-554.

Quantitative imaging of single cesium atoms in the channels of a Beryl crystal

Knez, D., Gspan, C., Simic, N., Mitsche, S., Fitzek, H. M., Kothleitner, G., Grogger, W. & Hofer, F., 2023, *MC 2023 Microscopy Conference*. S. 553-554

Mixed-metal nanoparticles: phase transitions and diffusion in Au-VO clusters

Ernst, W. E., Lasserus, M., Knez, D., Hofer, F. & Hauser, A. W., 11 Juli 2022, in: Faraday Discussions. 242, S. 160-173 14 S.

Atom by Atom analysis of complex oxide materials

Knez, D., Kobald, A., Hofer, F. & Kothleitner, G., 21 Apr. 2022.

How an ASEM Workshop led to a successful quantification for atomic-scale EELS maps

Lammer, J., Löffler, S., Berger, C., Knez, D., Haberfehlner, G., Hofer, F., Bucher, E., Sitte, W. & Grogger, W., 21 Apr. 2022.

Imaging the magnetic domain structure of spinodal alloys using differential phase contrast STEM (DPC-STEM)

Radlinger, T., Hofer, F. & Kothleitner, G., 21 Apr. 2022.

Correlating whole sample EDS and Raman mappings – A case study of a Chelyabinsk meteorite fragment

Fitzek, H. M., Zankel, A., Dienstleder, M., Rattenberger, J., Schröttner, H. & Hofer, F., Feb. 2022, in: *Micron*. 153, 19 S., 103177.

Ultrastructure of spherites in the midgut diverticula and Malpighian tubules of the harvestman *Amilenus aurantiacus* during the winter diapause

Lipovsek, S., Novak, T., Daris, B., Hofer, F., Leitinger, G. & Letofsky-Papst, I., Jan. 2022, in: *Histochemistry and Cell Biology*. 157, 1, S. 107-118 12 S.

A method for a column-by-column EELS quantification of barium lanthanum ferrate

Lammer, J., Berger, C., Löffler, S., Knez, D., Longo, P., Kothleitner, G., Hofer, F., Haberfehlner, G., Bucher, E., Sitte, W. & Grogger, W., 2022, in: *Ultramicroscopy*. 234, 9 S., 113477.

A study on the correlation between micro and magnetic domain structure of $\text{Cu}_{52}\text{Ni}_{34}\text{Fe}_{14}$ spinodal alloys

Radlinger, T., Winkler, R., Knoll, P., Zweck, J., Plank, H., Hofer, F. & Kothleitner, G., 2022, in: *Journal of Alloys and Compounds*. 922, 10 S., 166214.

Challenges in the characterization of complex nanomaterials with analytical STEM

Knez, D., Lammer, J., Oberaigner, M., Simic, N., Haberfehlner, G., Fisslthaler, E., Krisper, R., Radlinger, T., Grogger, W., Hofer, F. & Kothleitner, G., 2022, S. 80.

Correlative microscopy and machine learning –new tools for material characterization

Fitzek, H. M., Schmidt, R., Nachtnebel, M., Rattenberger, J., Zankel, A., Hofer, F. & Schröttner, H., 2022.

Correlative microscopy and machine learning –new tools for material characterization

Fitzek, H. M., Schmidt, R., Nachtnebel, M., Rattenberger, J., Zankel, A., Hofer, F. & Schröttner, H., 2022, S. HM 114. 1 S.

Correlative Raman microscopy, SEM and EDS – The combined evaluation of a whole sample mapping of a Chelyabinsk meteorite fragment

Fitzek, H. M., Schmidt, R., Nachtnebel, M., Rattenberger, J., Zankel, A., Hofer, F. & Schröttner, H., 2022, S. 43-44.

Exploring the magnetic microstructure of spinodal alloys with differential phase contrast scanning transmission electron microscopy (DPC-STEM)

Radlinger, T., Hofer, F. & Kothleitner, G., 2022.

Exploring the magnetic microstructure of spinodal alloys with differential phase contrast scanning transmission electron microscopy (DPC-STEM)

Radlinger, T., Hofer, F. & Kothleitner, G., 2022, S. 353-354.

Quantifying Ordering Phenomena at the Atomic Scale in Rare Earth Oxide Ceramics via EELS Elemental Mapping

Lammer, J., Berger, C., Löffler, S., Knez, D., Bucher, E., Haberfehlner, G., Kothleitner, G., Hofer, F., Sitte, W. & Grogger, W., 2022, S. 371-372.

Iron-rich talc as air-stable platform for magnetic two-dimensional materials

Matković, A., Ludescher, L., Peil, O. E., Sharma, A., Gradwohl, K. P., Kratzer, M., Zimmermann, M., Genser, J., Knez, D., Fisslthaler, E., Gammer, C., Lugstein, A., Bakker, R. J., Romaner, L., Zahn, D. R. T., Hofer, F., Salvan, G., Raith, J. G. & Teichert, C., Dez. 2021, in: *npj 2D Materials and Applications*. 5, 1, 94.

A New Way Of Combining Solar Energy Conversion And Storage

Höfler, S. F., Zettl, R., Knez, D., Haberfehlner, G., Hofer, F., Zuccala, E., Rath, T., Trimmel, G., Wilkening, H. M. R. & Hanzu, I., 13 Okt. 2021.

An In Situ Synchrotron Dilatometry and Atomistic Study of Martensite and Carbide Formation during Partitioning and Tempering

Plesiutchnig, E., Albu, M., Canelo Yubero, D., Razumovskiy, V., Stark, A., Schell, N., Kothleitner, G., Beal, C., Sommitsch, C. & Hofer, F., 2 Juli 2021, in: *Materials*. 14, 14, 3849.

Benefits of direct electron detection and PCA for EELS investigation of organic photovoltaics materials

Haberfehlner, G., Höfler, S. F., Rath, T., Trimmel, G., Kothleitner, G. & Hofer, F., Jan. 2021, in: *Micron*. 140, 5 S., 102981.

Long-Term Stability of Pr₂NiO_{4+δ} Air Electrodes for Solid Oxide Cells against Chromium Poisoning

Schrödl, N., Egger, A., Lammer, J., Hofer, F. & Sitte, W., Jan. 2021, in: *Journal of the Electrochemical Society*. 168, 1, 9 S., 014509.

Advanced electron microscopy characterisation of iron rich talc, a novel class of magnetic 2D materials

Knez, D., Matkovic, A., Genser, J., Hofer, F., Teichert, C. & Fisslthaler, E., 2021, S. 168. 1 S.

Correlations between microstructural and magnetic properties of a spinodally decomposed Cu₅₂Ni₃₄Fe₁₄ alloy

Radlinger, T., Kothleitner, G. & Hofer, F., 2021.

Correlations between microstructural and magnetic properties of a spinodally decomposed Cu₅₂Ni₃₄Fe₁₄ alloy

Radlinger, T., Hofer, F. & Kothleitner, G., 2021, S. 123.

High Resolution STEM Simulations of Beryl Crystal Impurities Using Multislice Methods (QSTEM)

Simic, N., Knez, D. & Hofer, F., 2021, S. 17.

Magnetic nanostructure of a spinodally decomposed Cu₅₂-Ni₃₄-Fe₁₄ alloy

Radlinger, T., Kothleitner, G. & Hofer, F., 2021, S. 3741.

Relationship of Microstructure and Magnetic Domain Configuration of a Spinodally Decomposed Cu₅₂Ni₃₄Fe₁₄ Alloy.

Radlinger, T., Hofer, F. & Kothleitner, G., 2021, S. 22.

Spectroscopic STEM imaging in 2D and 3D

Kothleitner, G., Haberfehlner, G., Albu, M., Fisslthaler, E., Knez, D., Lammer, J., Oberaigner, M., Radlinger, T., Grogger, W. & Hofer, F., 2021.

New Solar Cell-Battery Hybrid Energy System: Integrating Organic Photovoltaics with Li-Ion and Na-Ion Technologies

Hoefer, S. F., Zettl, R., Knez, D., Haberfehlner, G., Hofer, F., Rath, T., Trimmel, G., Wilkening, H. M. R. & Hanzu, I., 28 Dez. 2020, in: *ACS Sustainable Chemistry and Engineering*. 8, 51, S. 19155-19168 14 S.

Attosecond spectroscopy of ultrafast carrier dynamics in nanoparticles

Lackner, F., Gessner, J. A., Siegrist, F., Schiffmann, A., Messner, R., Lasserus, M. I., Schnedlitz, M., Toulson, B. W., Knez, D., Hofer, F., Gessner, O., Ernst, W. E. & Schultze, M., 16 Nov. 2020, *International Conference on Ultrafast Phenomena, UP 2020*. The Optical Society, 3 S. M4A.13. (Optics InfoBase Conference Papers).

Helium droplet assisted synthesis of plasmonic Ag@ZnO core@shell nanoparticles

Schiffmann, A., Jauk, T., Knez, D., Fitzek, H., Hofer, F., Lackner, F. & Ernst, W. E., 1 Nov. 2020, in: *Nano Research*. 13, 11, S. 2979-2986 8 S.

Thermally Induced Diffusion and Restructuring of Iron Triade (Fe, Co, Ni) Nanoparticles Passivated by Several Layers of Gold

Schnedlitz, M., Knez, D., Lasserus, M., Hofer, F., Fernández-Perea, R., Hauser, A. W., Pilar De Lara-Castells, M. & Ernst, W. E., 30 Juli 2020, in: The Journal of Physical Chemistry C. 124, 30, S. 16680-16688 9 S.

Ultrashort XUV pulse absorption spectroscopy of partially oxidized cobalt nanoparticles

Schiffmann, A., Toulson, B. W., Knez, D., Messner, R., Schnedlitz, M., Lasserus, M., Hofer, F., Ernst, W. E., Gessner, O. & Lackner, F., 14 Mai 2020, in: Journal of Applied Physics. 127, 18, 7 S., 184303.

Microstructural changes induced by Er and Zr additions to A356 alloy investigated by thermal analyses and STEM observations

Colombo, M., Albu, M., Gariboldi, E. & Hofer, F., März 2020, in: Materials Characterization. 161, 7 S., 110117.

Differential Phase Contrast Imaging in Scanning Transmission Electron Microscopy

Radlinger, T., Kothleitner, G. & Hofer, F., 2020.

Elektronenmikroskopie mit atomarer Auflösung

Hofer, F., 2020, Der eiserne Brunnen, 66, 1, S. 5-9.

Multiscale and Correlative Analytical Electron Microscopy of Extraterrestrial Minerals

Albu, M., Fitzek, H. M., Moser, D., Kothleitner, G. & Hofer, F., 2020, in: Frontiers in Astronomy and Space Sciences. 7, 544331.

Phase segregation in NiAu-nanoalloys induced by swift electrons

Knez, D., Schnedlitz, M., Lasserus, M. I., Hauser, A., Ernst, W. E., Hofer, F. & Kothleitner, G., 2020.

Phase segregation in NiAu-nanoalloys induced by swift electrons

Knez, D., Schnedlitz, M., Lasserus, M. I., Hauser, A., Ernst, W. E., Hofer, F. & Kothleitner, G., 2020, S. 1100.

Structural characterization of poly-Si Films crystallized by Ni Metal Induced Lateral Crystallization

Vouroutzis, N., Stoemenos, J., Frangis, N., Radnóczy, G. Z., Knez, D., Hofer, F. & Pécz, B., 1 Dez. 2019, in: Scientific Reports. 9, 1, 2844.

Greatly enhanced luminescence efficiency of CdS nanoparticles in aqueous solution

Kuznetsova, Y. V., Letofsky-Papst, I., Sochor, B., Schummer, B., Sergeev, A. A., Hofer, F. & Rempel, A. A., 20 Nov. 2019, in: Colloids and Surfaces A: Physicochemical and Engineering Aspects. 581, 123814.

Elucidation of Donor:Acceptor Phase Separation in Nonfullerene Organic Solar Cells and Its Implications on Device Performance and Charge Carrier Mobility

Hoeffler, S. F., Haberehner, G., Rath, T., Keilbach, A., Hobisch, M. A., Dixon, A., Pavlica, E., Bratina, G., Kothleitner, G., Hofer, F. & Trimmel, G., 28 Okt. 2019, in: ACS Applied Energy Materials. 2, 10, S. 7535-7545 11 S.

The impact of swift electrons on the segregation of Ni-Au nanoalloys

Knez, D., Schnedlitz, M., Lasserus, M., Hauser, A., Ernst, W. E., Hofer, F. & Kothleitner, G., 16 Sept. 2019, in: Applied Physics Letters. 115, 12, 123103.

Elemental Nanoanalysis of Interfacial Alumina–Aryl Fluoride Interactions in Fullerene-Free Organic Tandem Solar Cells

Hoeffler, S. F., Haberehner, G., Rath, T., Canteri, R., Barozzi, M., Hofer, F. & Trimmel, G., 16 Aug. 2019, (Elektronische Veröffentlichung vor Drucklegung.) in: Advanced Materials Interfaces . 9 S., 1901053.

Effects of the Core Location on the Structural Stability of Ni-Au Core-Shell Nanoparticles

Schnedlitz, M., Fernandez-Perea, R., Knez, D., Lasserus, M., Schiffmann, A., Hofer, F., Hauser, A. W., De Lara-Castells, M. P. & Ernst, W. E., 15 Aug. 2019, in: The Journal of Physical Chemistry C. 123, 32, S. 20037-20043 7 S.

Towards new plasmonic materials: Synthesis of K and K-Au nanoparticles with helium nanodroplets

Messner, R., Knez, D., Hofer, F., Ernst, W. E. & Lackner, F., Juni 2019. 1 S.

Nanomaterials Synthesized in Helium Droplets

Ernst, W. E., Hauser, A., Lackner, F., Knez, D. & Hofer, F., Mai 2019, S. 226.

Towards new plasmonic materials: Synthesis of K and K-Au nanoparticles with helium nanodroplets

Messner, R., Knez, D., Hofer, F., Ernst, W. E. & Lackner, F., Mai 2019, S. 72.

On the Impact of Swift Electrons on Mass Transport Phenomena at the Nanoscale

Knez, D., Schnedlitz, M., Lasserus, M. I., Schiffmann, A., Ernst, W. E., Hofer, F. & Kothleitner, G., Apr. 2019, *Workshop Handbook: Program & Abstract*. S. 47

Spectroscopic STEM imaging in 2D and 3D

Kothleitner, G., Abu, M., Grogger, W., Haberfehlner, G. & Hofer, F., Feb. 2019. 2 S.

Influence of surface properties of nitrocarburised and oxidised steel on its tribological behaviour

Velkavrh, I., Äusserer, F., Klien, S., Voyer, J., Lingenhölle, K., Kafexhiu, F., Mandrino, D., Podgomik, B., Rattenberger, J., Schröttner, H., Hofer, F. & Diem, A., 1 Jan. 2019, in: *Tribologie und Schmierungstechnik*. 66, 1, S. 25-33 9 S.

On the passivation of iron particles at the nanoscale

Lasserus, M., Knez, D., Schnedlitz, M., Hauser, A. W., Hofer, F. & Ernst, W. E., 1 Jan. 2019, in: *Nanoscale Advances*. 1, 6, S. 2276-2283 8 S.

Synthesis of nanosized vanadium(v) oxide clusters below 10 nm

Lasserus, M., Knez, D., Lackner, F., Schnedlitz, M., Messner, R., Schennach, D., Kothleitner, G., Hofer, F., Hauser, A. W. & Ernst, W. E., 1 Jan. 2019, in: *Physical Chemistry, Chemical Physics*. 21, 37, S. 21104-21108 5 S.

Advanced characterization of alloys by using ex-and in-situ high resolution Scanning Transmission Electron Microscopy

Abu, M., Kothleitner, G. & Hofer, F., 2019, *European Materials Research Society*. S. Z 6.12

Analytical Electron Microscopy: Recent Advances and New Applications

Hofer, F., Abu, M., Grogger, W., Haberfehlner, G., Knez, D., Lammer, J., Schmidt, F. & Kothleitner, G., 2019, *Proceedings-14th Multinational Congress on Microscopy, Belgrad-Serbia, Sept. 15-20 2019*. S. 66-67

Electron Beam Induced Dynamics in Experiment and Simulation

Knez, D., Haberfehlner, G., Kothleitner, G. & Hofer, F., 2019, *Abstract MC2019*.

Improvements in Environmental Scanning Electron Microscopy –Universal Pressure Scanning Electron Microscopy (UPSEM)

Rattenberger, J., Fitzek, H. M., Schröttner, H. & Hofer, F., 2019, *Proceedings-14th Multinational Congress on Microscopy, Belgrad-Serbia, Sept. 15-20 2019*. S. 104-106

Multiscale and Correlative Analytical Electron Microscopy of Extraterrestrial Minerals

Abu, M., Zankel, A., Fitzek, H. M., Dienstleder, M., Simic, S., Hofer, F. & Kothleitner, G., 2019.

Multiscale and Correlative Analytical Electron Microscopy of Extraterrestrial Minerals

Abu, M., Zankel, A., Fitzek, H. M., Dienstleder, M., Simic, S., Hofer, F. & Kothleitner, G., 2019, *Deutsche Astrobiologische Gesellschaft-Workshop*. S. 36

Ultra-thin h-BN substrates for nanoscale plasmon spectroscopy

Schiffmann, A., Knez, D., Lackner, F., Lasserus, M., Messner, R., Schnedlitz, M., Kothleitner, G., Hofer, F. & Ernst, W. E., 2019, in: *Journal of Applied Physics*. 125, 2, 9 S., 023104.

Universal Pressure Scanning Electron Microscopy (UPSEM) - Improvements in Environmental Scanning Electron Microscopy

Rattenberger, J., Fitzek, H. M., Achtsnit, T., Schröttner, H. & Hofer, F., 2019.

Universal Pressure Scanning Electron Microscopy (UPSEM) - Improvements in Environmental Scanning Electron Microscopy

Rattenberger, J., Fitzek, H. M., Achtsnit, T., Schröttner, H. & Hofer, F., 2019, *Abstract MC 2019*. S. 367

On the Unexpected Alloying Behaviour of Ni-Au and Co-Au Core-Shell Nanoparticles,

Hauser, A., Schnedlitz, M., Lasserus, M. I., Meyer, R., Ernst, W. E., Knez, D., Hofer, F., Fernandez-Perea, R. & De Lara-Castells, M. P., Dez. 2018, S. 1.

Core-Shell Nanoparticles for Plasmonics and Catalysis

Schiffmann, A., Schnedlitz, M., Lasserus, M. I., Messner, R., Lackner, F., Hauser, A., Knez, D., Hofer, F. & Ernst, W. E., Okt. 2018. 1 S.

Core-shell nanoparticles prepared in superfluid helium droplets: structure, phase transitions, and alloy formation

Schiffmann, A., Schnedlitz, M., Lasserus, M. I., Messner, R., Lackner, F., Meyer, R., Hauser, A., Knez, D., Hofer, F. & Ernst, W. E., Okt. 2018. 1 S.

Helium Nanodroplet Based Synthesis of Tailored Nanoparticles for Surface Enhanced Raman Spectroscopy

Lackner, F., Schiffmann, A., Lasserus, M. I., Messner, R., Schnedlitz, M., Fitzek, H. M., Pölt, P., Knez, D., Hofer, F. & Ernst, W. E., Sept. 2018, *68th Annual Meeting of the Austrian Physical Society*. Graz: Verlag der Technischen Universität Graz, S. 83

Plasmon spectroscopy of metallic nanoparticles on ultra-thin h-BN films

Schiffmann, A., Knez, D., Lackner, F., Lasserus, M. I., Messner, R., Schnedlitz, M., Hofer, F. & Ernst, W. E., Sept. 2018, *68th Annual Meeting of the Austrian Physical Society*. Graz: Verlag der Technischen Universität Graz, S. 83

Thermally induced alloying process in core@shell AgAu particles: A new method to measure diffusion on the nanoscale

Lasserus, M. I., Schnedlitz, M., Hauser, A., Knez, D., Messner, R., Schiffmann, A., Lackner, F., Hofer, F. & Ernst, W. E., Sept. 2018, S. 82.

To be or not to be alloyed: The unexpected behaviour of Ni-Au and Co-Au core-shell nanoparticles upon heating

Schnedlitz, M., Knez, D., Meyer, R., Lasserus, M. I., Messner, R., Schiffmann, A., Lackner, F., Hauser, A., Hofer, F. & Ernst, W. E., Sept. 2018, *68th Annual Meeting of the Austrian Physical Society*. Graz: Verlag der Technischen Universität Graz, S. 82

Functional plasmonic nanostructures obtained from helium droplet synthesis

Lackner, F., Schiffmann, A., Lasserus, M. I., Messner, R., Schnedlitz, M., Fitzek, H. M., Pölt, P., Knez, D., Hofer, F. & Ernst, W. E., Aug. 2018. 1 S.

Ultra-thin h-BN films employed as STEM substrates for nanoscale plasmon spectroscopy

Schiffmann, A., Knez, D., Lackner, F., Lasserus, M. I., Messner, R., Schnedlitz, M., Hofer, F. & Ernst, W. E., Aug. 2018. 1 S.

Stability of Core-Shell Nanoparticles for Catalysis at Elevated Temperatures: Structural Inversion in the Ni-Au System Observed at Atomic Resolution

Schnedlitz, M., Lasserus, M., Meyer, R., Knez, D., Hofer, F., Ernst, W. E. & Hauser, A. W., 13 Feb. 2018, in: *Chemistry of Materials*. 30, 3, S. 1113-1120 8 S.

Temperature Studies of Ni@Au and Co@Au Core@Shell Systems on the Nanoscale

Schiffmann, A., Schnedlitz, M., Meyer, R., Lasserus, M. I., Messner, R., Lackner, F., Knez, D., Hofer, F., Hauser, A. & Ernst, W. E., 6 Feb. 2018.

Atoms in motion: electron beam induced dynamics of metallic clusters in experiment & simulation

Knez, D., Fisslthaler, E., Hofer, F., Schnedlitz, M., Lasserus, M. I., Schiffmann, A. & Ernst, W. E., Feb. 2018. 1 S.

On the stability of Ag-Au and Ni-Au core-shell particles at elevated temperatures: diffusion, oxidation and structural inversion at atomic resolution

Schnedlitz, M., Lasserus, M. I., Meyer, R., Messner, R., Schiffmann, A., Lackner, F., Ernst, W. E., Hauser, A., Knez, D. & Hofer, F., Feb. 2018. 1 S.

Plasmonic Properties of Ag@Au core@shell Nanoparticles and Nanostructures Formed by Helium Droplet Synthesis

Lackner, F., Schiffmann, A., Schnedlitz, M., Lasserus, M. I., Messner, R., Ernst, W. E., Fitzek, H. M., Pölt, P., Knez, D. & Hofer, F., Feb. 2018. 1 S.

Temperature studies of Ni@Au and Co@Au core@shell systems on the nanoscale

Schiffmann, A., Schnedlitz, M., Meyer, R., Lasserus, M. I., Messner, R., Lackner, F., Hauser, A., Ernst, W. E., Knez, D. & Hofer, F., Feb. 2018. 1 S.

Adatom dynamics and the surface reconstruction of Si(110) revealed using time-resolved electron microscopy

Furnival, T., Knez, D., Schmidt, E., Leary, R. K., Kothleitner, G., Hofer, F., Bristowe, P. D. & Midgley, P., 2018, in: Applied Physics Letters. 113, 18, S. 183104

Copper-alumina nanocomposites derived from CuAlO₂: Phase transformation and microstructural coarsening

Kracum, M. R., Marvel, C. J., Albu, M., Hofer, F., Harmer, M. P. & Chan, H., 2018, in: Journal of the American Ceramic Society. 101, 12, S. 5801-5810 S.

Electron Beam Driven Dynamics in Experiment and Simulation

Knez, D., Schnedlitz, M., Lasserus, M. I., Ernst, W. E. & Hofer, F., 2018, *Program & Abstract Book*. S. 34

How dark are radial breathing modes in Plasmonic Nanodisks?

Schmidt, F., Losquin, A., Hofer, F., Hohenau, A., Krenn, J. & Kociak, M., 2018, in: ACS Photonics. 5, 3, S. 861-866

Modelling electron beam induced dynamics in metallic nanoclusters

Knez, D., Schnedlitz, M., Lasserus, M. I., Schiffmann, A., Ernst, W. E. & Hofer, F., 2018, in: Ultramicroscopy. 192, S. 69-79

Phase decomposition of La₂NiO_{4+δ} under Cr- and Si-poisoning conditions

Schrödl, N., Egger, A., Gspan, C., Hörschen, T., Hofer, F. & Sitte, W., 2018, in: Solid State Ionics. 322, S. 44-53

Properties of nitrocarburised and oxidised steel surfaces and the correlation with their tribological behaviour under unlubricated sliding conditions

Velkavrh, I., Ausserer, F., Klien, S., Voyer, J., Lingenhölle, K., Kafexhiu, F., Mandrino, D., Podgornik, B., Rattenberger, J., Schröttner, H. & Hofer, F., 2018, in: Wear. 410-411, S. 127-141

Structural disorder of natural BiMn superlattices grown by molecular beam epitaxy

Springholz, G., Wimmer, S., Groiss, H., Albu, M., Hofer, F., Caha, O., Kriegner, D., Stangl, J., Bauer, G. & Holy, V., 2018, in: Physical Review B. 98, 5, S. 054202 14 S.

Thermally induced alloying processes in a bimetallic system at the nanoscale: AgAu sub-5 nm core-shell particles studied at atomic resolution

Lasserus, M., Schnedlitz, M., Knez, D., Messner, R., Schiffmann, A., Lackner, F., Hauser, A. W., Hofer, F. & Ernst, W. E., 2018, in: Nanoscale. 10, 4, S. 2017-2024 8 S.

Indacenodithiophene-Based Small Molecule Acceptor Breaking the 10% Efficiency Barrier in Non-Fullerene Organic Solar Cells

Höfler, S. F., Hobisch, M., Haberfehlner, G., Hofer, F., Rath, T. & Trimmel, G., 13 Nov. 2017.

Thermal vs. beam induced dynamics in the TEM: in situ experiments and simulation

Knez, D., Lasserus, M. I., Schnedlitz, M., Fisslthaler, E., Ernst, W. & Hofer, F., 26 Sept. 2017, S. 45.

STEM study of NiSi₂/Si interface at inclusion boundaries

Radnóczy, G. Z., Knez, D., Hofer, F., Frangis, N., Vouroutzis, N., Stoemenos, J. & Pécz, B., 24 Sept. 2017, *MCM2017 conference*. 1 S.

In situ studies of high-purity mono- and bimetallic nanostructures in experiment and simulation

Knez, D., Schnedlitz, M., Lasserus, M. I., Kothleitner, G., Hauser, A., Ernst, W. E. & Hofer, F., Aug. 2017, S. 582.

Gold doped helium nanodroplets: from atomic spectroscopy to localized surface plasmon resonances in deposited nanoparticles

Lackner, F., Messner, R., Schiffmann, A., Lasserus, M. I., Schnedlitz, M., Knez, D., Haberfehlner, G., Kothleitner, G., Hofer, F. & Ernst, W. E., Juni 2017.

Transformation dynamics of Ni clusters into NiO rings under electron beam irradiation

Knez, D., Thaler, P., Volk, A., Kothleitner, G., Ernst, W. E. & Hofer, F., 1 Mai 2017, in: *Ultramicroscopy*. 176, S. 105-111 7 S.

Inclusions in Si whiskers grown by Ni metal induced lateral crystallization

Radnóczy, G. Z., Knez, D., Hofer, F., Frangis, N., Vouroutzis, N., Stoemenos, J. & Pécz, B., 14 Apr. 2017, in: *Journal of Applied Physics*. 121, 14, 145301.

Electron beam induced dynamics of atoms and clusters in experiment and simulation

Knez, D., Haberfehlner, G., Thaler, P., VOLK, A., Ernst, W. E., Kothleitner, G., Furnival, T., Midgley, P. & Hofer, F., Apr. 2017.

Metallic nanoparticles prepared in superfluid helium droplets: structure, phase transitions, alloy formation

Schnedlitz, M., Lasserus, M. I., Knez, D., Hauser, A., Hofer, F. & Ernst, W. E., Apr. 2017.

3D Imaging of Gap Plasmons in Vertically Coupled Nanoparticles by EELS Tomography

Haberfehlner, G., Schmidt, F., Schaffernak, G., Hörl, A., Trügler, A., Hohenau, A., Hofer, F., Krenn, J., Hohenester, U. & Kothleitner, G., 2017, in: *Nano Letters*. 2017, 17, S. 6773-6777

Analytical microstructure characterization of advanced alloys and steels at atomic resolution

Konrad, L., Albu, M., Haberfehlner, G. & Hofer, F., 2017.

Direct imaging of channel constituents in beryl

Gspan, C., Grogger, W., Fitzek, H. M., Knez, D., Kothleitner, G., Gatterer, K. & Hofer, F., 2017, *IAMNano 2017*. S. 23

EELS and X-ray spectroscopic STEM imaging in 2D and 3D

Kothleitner, G., Haberfehlner, G., Meingast, A., Chan, H., Hofer, F. & Mendis, B., 2017, *EDGE 2017*. S. T39

Hybrid plasmonics: From plasmon-plasmon to plasmon-exciton coupling

Schmidt, F., Dittbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J., 2017, *EDGE 2017*. S. T45

In situ heating studies of diffusion barrier layers for semiconductor devices

Knez, D., Dienstleder, M., Grogger, W., Hofer, F. & Fisslthaler, E., 2017.

In situ studies of high-purity mono- and bimetallic nanostructures in experiment and simulation

Knez, D., Schnedlitz, M., Lasserus, M. I., Kothleitner, G., Hauser, A., Ernst, W. E. & Hofer, F., 2017.

In situ studies of high-purity mono- and bimetallic nanostructures in experiment and simulation

Knez, D., Schnedlitz, M., Lasserus, M. I., Kothleitner, G., Hauser, A., Ernst, W. E. & Hofer, F., 2017.

In situ studies of high-purity mono- and bimetallic nanostructures in experiment and simulation

Knez, D., Schnedlitz, M., Lasserus, M. I., Kothleitner, G., Hauser, A., Ernst, W. E. & Hofer, F., 2017, *ASEM*. S. 47

Modeling the microstructural and yield strength evolution of an age-hardenable Al alloy for high temperature applications

Colombo, M., Gariboldi, E., Bassani, P., Albu, M. & Hofer, F., 2017, *THERMEC 2016*. Sommitsch, C., Ionescu, M., Mishra, B., Mishra, B., Kozeschnik, E. & Chandra, T. (Hrsg.). Trans Tech Publications Ltd., S. 380-385 6 S. (Materials Science Forum; Band 879).

Oxygen exchange kinetics of La_{0.6}Sr_{0.4}CoO_{3-δ} affected by changes of the surface composition due to chromium and silicon poisoning

Bucher, E., Gspan, C., Höschel, T., Hofer, F. & Sitte, W., 2017, in: *Solid State Ionics*. 299, S. 26-31

Spectrum image analysis tool - A flexible MATLAB solution to analyze EEL and CL spectrum images

Schmidt, F., Hofer, F. & Krenn, J. R., 2017, in: *Micron*. 93, S. 43-51

Thermally induced breakup of metallic nanowires: Experiment and theory

Schnedlitz, M., Lasserus, M., Knez, D., Hauser, A. W., Hofer, F. & Ernst, W. E., 2017, in: *Physical Chemistry, Chemical Physics*. 19, 14, S. 9402-9408 7 S.

Thermal vs. beam induced dynamics in the TEM: in situ experiments and simulation

Knez, D., Lasserus, M. I., Schnedlitz, M., Fisslthaler, E., Ernst, W. E. & Hofer, F., 2017, *13th Multinational Congress on Microscopy September 24-29, 2017 in Rovinj, Croatia*. S. 96-98

Transformation dynamics of Ni clusters into NiO rings under electron beam irradiation

Knez, D., Thaler, P., VOLK, A., Kothleitner, G., Ernst, W. & Hofer, F., 2017, in: *Ultramicroscopy*. 176, S. 105-111

Universal pressure scanning electron microscopy (UPSEM) –electron microscopy from high vacuum to atmospheric pressure

Rattenberger, J., Achtsnit, T., Fitzek, H. M., Schröttner, H. & Hofer, F., 2017, *MC2017*. S. IM1.012

Precipitation of Long-Period Stacking Ordered Structure in Mg–Gd–Zn–Mn Alloy

Li, J., Albu, M., Wu, Y., Peng, L., Dienstleder, M., Kothleitner, G., Hofer, F. & Schumacher, P., 22 Dez. 2016, in: *Advanced Engineering Materials*. S. 74-77

Presence of silver in the strengthening particles of an Al-Cu-Mg-Si-Zr-Ti-Ag alloy during severe overaging and creep

Gariboldi, E., Bassani, P., Albu, M. & Hofer, F., 24 Nov. 2016, in: *Acta Materialia*. 125, S. 50-57 7 S.

Molecular dynamics simulations of experimentally observed diffusion processes on the surface of metallic nanowires

Schnedlitz, M., Hauser, A., Lasserus, M. I., Knez, D., VOLK, A., Hofer, F. & Ernst, W. E., Sept. 2016, S. 201. 1 S.

Optimizing the Environmental Scanning Electron Microscope for In Situ Applications

Rattenberger, J., Fitzek, H. M., Schröttner, H., Wagner, J. & Hofer, F., Sept. 2016.

Temperature stability measurement of mono-metallic nanowires generated in superfluid helium droplets studied by atomic resolution electron tomography

Lasserus, M. I., Schnedlitz, M., Knez, D., VOLK, A., Hofer, F. & Ernst, W. E., Sept. 2016, S. 200. 1 S.

Modeling of the microstructural evolution and yield strength of an innovative age-hardenable Al alloy for high temperature applications

Colombo, M., Gariboldi, E., Bassani, P., Albu, M. & Hofer, F., 1 Juni 2016.

Analytical Sub-Angstrom Scanning Transmission Electron Microscopy of Alloys and Steels

Albu, M., Li, J., Pal, A., Plesiutschnig, E., Picu, R. C., Schumacher, P., Panzirsch, B., Kothleitner, G. & Hofer, F., 31 Mai 2016.

Analytical Scanning Transmission Electron Microscopy at Atomic Resolution

Hofer, F., Grogger, W., Gspan, C., Haberfehlner, G., Albu, M., Schmidt, F. & Knez, D., Apr. 2016.

Vortex Assisted Growth of Metallic Nanowires in Superfluid Helium Droplets

VOLK, A., Thaler, P., Hauser, A., Knez, D., Grogger, W., Hofer, F. & Ernst, W. E., 6 März 2016.

Erratum: The impact of doping rates on the morphologies of silver and gold nanowires grown in helium nanodroplets (Phys. Chem. Chem. Phys. (2016) DOI: 10.1039/c5cp06248a)

Volk, A., Thaler, P., Knez, D., Hauser, A. W., Steurer, J., Grogger, W., Hofer, F. & Ernst, W. E., 28 Jan. 2016, in: Physical Chemistry, Chemical Physics. 18, 4, S. 3359 1 S.

The impact of doping rates on the morphologies of silver and gold nanowires grown in helium nanodroplets

Volk, A., Thaler, P., Knez, D., Hauser, A. W., Steurer, J., Grogger, W., Hofer, F. & Ernst, W. E., 1 Jan. 2016, in: Physical Chemistry, Chemical Physics. 18, 3, S. 1451-1459 9 S.

High-quality imaging in environmental scanning electron microscopy – optimizing the pressure limiting system and the secondary electron detection of a commercially available ESEM

Fitzek, H. M., Schröttner, H., Wagner, J., Hofer, F. & Rattenberger, J., Jan. 2016, in: Journal of Microscopy. 262, S. 85-91

Atoms in Motion: Electron beam induced dynamics in experiment and simulation

Knez, D., VOLK, A., Thaler, P., Ernst, W. E. & Hofer, F., 2016, *European Microscopy Congress 2016: Proceedings*. Wiley-VCH, S. 129-130

Chromium and silicon poisoning of La_{0.6}Sr_{0.4}CoO_{3-δ} IT-SOFC cathodes at 800°C

Bucher, E., Schrödl, N., Gspan, C., Höschel, T., Hofer, F. & Sitte, W., 2016, *Cells and stacks*. S. 233/337 239 S. A0810

Edge Mode Coupling within a Plasmonic Nanoparticle

Schmidt, F.-P., Dittbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J. R., 2016, in: Nano Letters. 16, S. 5152-5155 3 S.

Effects of trace elements (Y and Ca) on the eutectic Ge in Al e Ge based alloys

Li, J., Wanderka, N., Balogh, Z., Stender, P., Kropf, H., Albu, M., Tsunekawa, Y., Hofer, F., Schmitz, G. & Schumacher, P., 2016, in: Acta Materialia. 111, S. 85-95

Electron beam process for the production of model alloys

Sommitsch, C., Wiednig, C. A., Spenger, T., Enzinger, N., Hofer, F. & Simic, S., 2016, *Beam Technologies & Laser Application*. St. Petersburg: Publishing house SpbSPU, S. 75-81

FEBID Based 3D Nano-Printing of Plasmonic Gold Structures: Beyond Current Limitations

Winkler, R., Schmidt, F., Haselmann, U., Lewis, B. B., Fowlkes, J. D., Rack, P., Kothleitner, G., Hofer, F. & Plank, H., 2016

Focused electron beam induced deposition as a tool to create electron vortices

Beche, A., Winkler, R., Plank, H., Hofer, F. & Verbeeck, J., 2016, in: Micron. 80, S. 34-38

Formation of bimetallic clusters in superfluid helium nanodroplets analysed by atomic resolution electron tomography

Haberfehlner, G., Thaler, P., Knez, D., VOLK, A., Hofer, F., Ernst, W. E. & Kothleitner, G., 2016, *European Microscopy Congress 2016: Proceedings*. Wiley-VCH, S. 9-10 2 S.

Fundamentals of electron energy-loss spectroscopy

Hofer, F., Schmidt, F.-P., Grogger, W. & Kothleitner, G., 2016, in: IOP Conference Series: Materials Science and Engineering. 109, S. 1-9 9 S., 012007.

Fundamentals of electron energy-loss spectroscopy

Hofer, F., Schmidt, F., Grogger, W. & Kothleitner, G., 2016, *IOP Conf.Series: Materials Science and Engineering: EMAS 2015 Workshop*. Band 109. S. 012007 9 S.

How dark are dark plasmon modes - a correlative EELS and CL study on lithographed silver nanodisks

Schmidt, F., Losquin, A., Hofer, F., Krenn, J. R. & Kociak, M., 2016, *6th ASEM-Workshop*. Leoben, S. 27 1 S.

Long-termdegradation of $\text{La}_{0.6}\text{Sr}_{0.4}\text{Co}_{0.2}\text{Fe}_{0.8}\text{O}_{3-\delta}$ IT-SOFC cathodes due to silicon poisoning

Perz, M., Bucher, E., Gspan, C., Waldhäusl, J., Hofer, F. & Sitte, W., 2016, in: Solid State Ionics. 288, S. 22-27
<http://dx.doi.org/10.1016/j.ssi.2016.01.005>.

Phase decomposition in the chromium- and silicon-poisoned IT-SOFC cathode materials $\text{La}_{0.6}\text{Sr}_{0.4}\text{CoO}_{3-\delta}$ and $\text{La}_2\text{NiO}_{4+\delta}$

Schrödl, N., Bucher, E., Gspan, C., Egger, A., Ganser, C., Teichert, C., Hofer, F. & Sitte, W., 2016, in: Solid State Ionics. 288, S. 14-21 8 S.

Phase decomposition of $\text{La}_2\text{NiO}_{4+\delta}$ under Cr-and Si-poisoning conditions

Schrödl, N., Egger, A., Bucher, E., Gspan, C., Hörschen, T., Hofer, F. & Sitte, W., 2016, *Materials and cells*. S. 35/337 41 S. B0503

Pushing the Limits of Environmental Scanning Electron Microscopy

Rattenberger, J., Fitzek, H. M., Schröttner, H., Wagner, J. & Hofer, F., 2016.

Room temperature synthesis of CuInS_2 nanocrystals

Buchmaier, C., Rath, T., Pirolt, F., Knall, A.-C., Kaschnitz, P., Glatter, O., Wewerka, K., Hofer, F., Kunert, B., Krenn, K. & Trimmel, G., 2016, in: RSC Advances . 6, S. 106120-106129

Self-organized Sr leads to solid state twinning in nano-scaled eutectic Si phase

Albu, M., Pal, A., Gspan, C., Picu, C., Hofer, F. & Kothleitner, G., 2016, in: Scientific Reports. 6, S. 31635/1-31635/7 7 S.

Single grain analysis on a nanoscale in $\text{ZrO}_2:\text{Al}_2\text{O}_3$ nano-composites by means of high-resolution scanning transmission electron microscopy

Brossmann, U., Albu, M., Hofer, F. & Würschum, R., 2016, in: Materials Research Express. 3, 125009.

Synthesis and morphology of iron-iron oxide core-shell nanoparticles produced by high pressure gas condensation

Xing, L., ten Brink, G. H., Schmidt, F.-P., Haberfehlner, G., Hofer, F., Kooi, B. J. & George, P., 2016, in: Nanotechnology. 27, S. 215703 10 S.

The impact of doping rates on the morphologies of silver and gold nanowires grown in helium nanodroplets

Volk, A., Thaler, P., Knez, D., Hauser, A., Steurer, J., Grogger, W., Hofer, F. & Ernst, W., 2016, in: Physical Chemistry, Chemical Physics. 18, S. 1451-1459

Quantitative Nanoanalysis on a probe corrected (S)TEM

Grogger, W., Kraxner, J., Gspan, C., Albu, M., Knez, D., Haberfehlner, G., Kothleitner, G. & Hofer, F., 2 Okt. 2015.

Optimizing the Environmental Scanning Electron Microscope for the investigation of wet samples

Fitzek, H. M., Schröttner, H., Wagner, J., Nachtnebel, M., Hofer, F. & Rattenberger, J., 28 Sept. 2015.

Quantitative Nanoanalysis in an Aberration Corrected (S)TEM

Grogger, W., Kraxner, J., Gspan, C., Abu, M., Knez, D., Haberfehlner, G., Kothleitner, G. & Hofer, F., 24 Sept. 2015.

Electron Beam Processing for the Production of Model Alloys

Spenger, T., Enzinger, N., Hofer, F., Simic, S., Sommitsch, C. & Wiednig, C. A., 21 Sept. 2015.

Quantitative atomic scale inelastic STEM imaging

Kothleitner, G., Lugg, N. R., Neish, M. J., Findlay, S. D., Grogger, W., Hofer, F. & Allen, L. J., 14 Sept. 2015.

The Quest for Quantitative Figures on atomic resolution inelastic STEM images

Kothleitner, G., Lugg, N. R., Neish, M. J., Findlay, S. D., Grogger, W., Hofer, F. & Allen, L. J., 6 Sept. 2015.

Vortex Assisted Growth of Metallic Nanowires in Superfluid Helium Droplets

Volk, A., Thaler, P., Hauser, A., Knez, D., Grogger, W., Hofer, F. & Ernst, W., 2 Sept. 2015.

Electron beam induced oxidation of nickel nanoclusters

Knez, D., Volk, A., Thaler, P., Grogger, W., Ernst, W. & Hofer, F., 24 Aug. 2015.

Focused Ion Beam Preparation for Transmission Electron Microscopy

Dienstleder, M., Gspan, C., Kothleitner, G. & Hofer, F., 23 Aug. 2015.

Optimizing the environmental scanning electron microscope - getting high image quality above 1000 Pa

Fitzek, H. M., Schröttner, H., Wagner, J., Hofer, F. & Rattenberger, J., 23 Aug. 2015.

Energy dispersive X-ray spectrometry: from fundamentals to quantitative analysis

Grogger, W., Kraxner, J., Paller, M., Kothleitner, G. & Hofer, F., 17 Juni 2015.

SI analysis tool – a flexible MATLAB tool to analyze spectrum images

Schmidt, F., Kociak, M., Ditzbacher, H., Krenn, J. R. & Hofer, F., 1 Juni 2015.

Electron beam induced oxidation of nickel nanoclusters

Knez, D., Volk, A., Thaler, P., Grogger, W., Ernst, W. & Hofer, F., 7 Mai 2015.

Plasmon coupling on silver cuboids revealed by fast electrons

Schmidt, F., Ditzbacher, H., Hohenester, U., Hohenau, A., Hofer, F. & Krenn, J. R., 7 Mai 2015.

Simulating the pressure limiting system of Environmental Scanning Electron Microscopes using the direct simulation Monte-Carlo method

Fitzek, H. M., Schröttner, H., Wagner, J., Hofer, F. & Rattenberger, J., 7 Mai 2015.

Fundamentals of Electron Energy-loss Spectroscopy

Hofer, F., Kothleitner, G., Schmidt, F. & Grogger, W., 3 Mai 2015.

Flexible copper-indium-sulfide/polymer hybrid solar cells via a low temperature conversion route of metal xanthates

Trimmel, G., Fradler, C., Rath, T., Dunst, S., Letofsky-Papst, I., Saf, R., Kunert, B., Hofer, F. & Resel, R., 21 März 2015.

Copper indium sulphide/polymer hybrid solar cells via the metal xanthate route

Trimmel, G., Rath, T., Fradler, C., Dunst, S., Letofsky-Papst, I., Saf, R., Kunert, B., Resel, R. & Hofer, F., 2015.

Correlated 3D Nanoscale Mapping and Simulation of Coupled Plasmonic Nanoparticles

Haberfehlner, G., Trügler, A., Schmidt, F.-P., Hörl, A., Hofer, F., Hohenester, U. & Kothleitner, G., 2015, in: Nano Letters. 15, 11, S. 7726-7730

Correlative characterization of primary Al₃(Sc,Zr) phase in an Al-Zn-Mg based alloy

Li, J., Wiessner, M., Albu, M., Wurster, S., Sartory, B., Hofer, F. & Schumacher, P., 2015, in: Materials Characterization. 102, S. 62-70

Electron beam induced oxidation of nickel nanoclusters

Knez, D., Volk, A., Thaler, P., Grogger, W., Ernst, W. & Hofer, F., 2015, *Multinational Congress on Microscopy.* , S. O-126-188-190

ELECTRON BEAM INDUCED OXIDATION OF NICKEL NANOCLUSTERS

Knez, D., Volk, A., Grogger, W., Ernst, W. & Hofer, F., 2015, *Advanced Electron Microscopy.* , S. 12-12

Experimental evaluation of environmental scanning electron microscopes at high chamber pressure

Fitzek, H. M., Schröttner, H., Wagner, J., Hofer, F. & Rattenberger, J., 2015, in: Journal of Microscopy. 260, S. 133-139

Focused Ion Beam Preparation for Transmission Electron Microscopy

Dienstleder, M., Gspan, C., Kothleitner, G. & Hofer, F., 2015, *Multinational Congress on Microscopy.* , S. O-135-101-103

Formation of bimetallic clusters in superfluid helium nanodroplets analysed by atomic resolution electron tomography

Haberfehlner, G., Thaler, P., Knez, D., VOLK, A., Hofer, F., Ernst, W. E. & Kothleitner, G., 2015, in: Nature Communications . 6, S. 1-6 8779.

Fundamentals of Electron Energy-loss Spectroscopy

Hofer, F., Kothleitner, G., Schmidt, F. & Grogger, W., 2015, *European Workshop on Modern Developments and Applications in Microbeam Analysis.* , S. 163-175

Impact of different alkali metal salts on morphological and structural properties of solution-processed Cu₂ZnSnS₄ thin films

Buchmaier, C., Zahirovic, I., Rath, T., Falk, A., Reichmann, A., Hofer, F., Kunert, B., Resel, R. & Trimmel, G., 2015.

In-situ Dotierung von lösungsprozessierten Kesterit-Absorberschichten mit Alkalimetallen

Zahirovic, I., Buchmaier, C., Rath, T., Falk, A., Hofer, F., Kunert, B., Resel, R., Dimopoulos, T. & Trimmel, G., 2015.

Investigation of the aging-process of the precursor solution for the solution-based preparation of kesterite absorbers

Zahirovic, I., Buchmaier, C., Rath, T., Falk, A., Reichmann, A., Hofer, F., Kunert, B., Resel, R. & Trimmel, G., 2015.

Investigation on the formation of copper zinc tin sulphide nanoparticles from metal salts and dodecanethiol

Pateter, A., Haas, W., Chernev, B. S., Kunert, B., Resel, R., Hofer, F., Trimmel, G. & Rath, T., 2015, in: Materials Chemistry and Physics. 149-150, S. 94-98

Island-type growth of Au–Pt heterodimers: direct visualization of misfit dislocations and strain-relief mechanisms

Garcia-Negrete, C. A., Knappett, B. R., Schmidt, F.-P., Rojas, T. C., Wheatley, A. E. H., Hofer, F. & Fernandez, A., 2015, in: RSC Advances . 5, S. 55262-55268

Optimierung und Charakterisierung von lösungsprozessierten Kesterit-Absorberschichten

Buchmaier, C., Zahirovic, I., Rath, T., Falk, A., Reichmann, A., Hofer, F., Kunert, B., Resel, R., Dimopoulos, T. & Trimmel, G., 2015.

OPTIMIZING THE ENVIRONMENTAL SCANNING ELECTRON MICROSCOPE – GETTING HIGH IMAGE QUALITY ABOVE 1000 PA

Fitzek, H. M., Schröttner, H., Wagner, J., Hofer, F. & Rattenberger, J., 2015, S. O-159-166-167.

Plasmon coupling on silver cuboids revealed by fast electrons

Schmidt, F., Hohenester, U., Hohenau, A., Hofer, F. & Krenn, J. R., 2015.

Plasmon coupling on silver cuboids revealed by fast electrons

Schmidt, F., Ditzbacher, H., Hohenester, U., Hofer, F. & Krenn, J. R., 2015, *Book of Abstracts*.

PLASMON COUPLING ON SILVER CUBOIDS REVEALED BY FAST ELECTRONS

Schmidt, F., Hohenester, U., Ditzbacher, H., Hofer, F. & Krenn, J. R., 2015, *ASEM Workshop Advanced Electron Microscopy* ., S. 14-14

Plasmon modes of a silver thin film taper probed with STEM-EELS

Schmidt, F.-P., Ditzbacher, H., Trügler, A., Hohenester, U., Hohenau, A., Hofer, F. & Krenn, J. R., 2015, in: *Optics Letters*. 40, 23, S. 5670-5673

Simulating the pressure limiting system of Environmental Scanning Electron Microscopes using the direct simulation Monte-Carlo method

Fitzek, H. M., Schröttner, H., Wagner, J., Hofer, F. & Rattenberger, J., 2015, S. 25-25.

Solute adsorption and entrapment during eutectic Si growth in Al-Si-based alloys

Li, J., Albu, M., Hofer, F. & Schumacher, P., 2015, in: *Acta Materialia*. 83, S. 187-202

The quest for quantitative figures on atomic resolution inelastic STEM images

Kothleitner, G., Lugg, N. R., Neish, M. J., Findlay, S. D., Grogger, W. & Hofer, F., 2015, *Microscopy Conference* ., S. 528-528

Thermal instabilities and Rayleigh breakup of ultrathin silver nanowires grown in helium nanodroplets

Volk, A., Knez, D., Thaler, P., Hauser, A., Grogger, W., Hofer, F. & Ernst, W., 2015, in: *Physical Chemistry, Chemical Physics*. 17, S. 24570-24575

Vortex Assisted Growth of Metallic Nanowires in Superfluid Helium Droplets

Volk, A., Thaler, P., Hauser, A., Knez, D., Grogger, W., Hofer, F. & Ernst, W., 2015, *Gemeinsame Jahrestagung (ÖPG und SPS) in Wien* ., S. 50-50

Formation of bimetallic core-shell nanowires along vortices in superfluid He nanodroplets

Thaler, P., Volk, A., Lackner, F., Steurer, J., Knez, D., Grogger, W., Hofer, F. & Ernst, W. E., 23 Okt. 2014, in: *Physical Review B*. 90, 15, 155442.

Quantitative EDXS in STEM: Super-X, detector geometry and other topics

Grogger, W., Fladischer, S., Kraxner, J., Paller, M., Kothleitner, G. & Hofer, F., 30 Sept. 2014.

HR-STEM investigations of metallic nanoparticles grown with superfluid He-droplets

Knez, D., Thaler, P., Volk, A., Grogger, W., Ernst, W. & Hofer, F., 24 Sept. 2014.

HR-STEM investigations of metallic nanoparticles grown with superfluid He-droplets

Knez, D., Volk, A., Thaler, P., Fisslthaler, E., Grogger, W., Ernst, W. & Hofer, F., 7 Sept. 2014.

Increasing the Li Diffusivity of Poorly Conducting Solids by Mechanical Treatment

Wohlmuth, D., Epp, V., Letofsky-Papst, I., Kriechbaum, M., Amenitsch, H., Hofer, F. & Wilkening, M., 17 Aug. 2014.

Quantitative EDX and EELS Elemental Mapping at Atomic Resolution

Kothleitner, G., Neish, M. J., Lugg, N. R., Findlay, S. D., Grogger, W., Hofer, F. & Allen, L. J., 4 Aug. 2014.

Nucleation Kinetics of Entrained Eutectic Si in Al-Si Alloys

Li, J., Albu, M., Ludwig, T. H., Hofer, F., Arnberg, L. & Peter, S., 8 Juli 2014.

Scanning transmission electron microscopy at atomic resolution

Hofer, F., Grogger, W., Albu, M., Gspan, C., Findlay, S. D., Lugg, N. R., Allen, L. J. & Radmilovic, V. R., 7 Juli 2014.

Modification of eutectic Si in Al-Si based alloys

Li, J., Albu, M., Ludwig, T. H., Matsubara, Y., Hofer, F., Arnberg, L., Tsunekawa, Y. & Peter, S., 15 Juni 2014.

Flexible Polymer/Copper Indium Sulfide Hybrid Solar Cells Based on the Metal Xanthate Route and Low Temperature Annealing using Hexylamine

Fradler, C., Rath, T., Dunst, S., Letofsky-Papst, I., Saf, R., Kunert, B., Hofer, F., Resel, R. & Trimmel, G., 29 Mai 2014.

Scanning Transmission Electron Microscopy at Atomic Resolution

Hofer, F., Kothleitner, G., Schmidt, F. & Grogger, W., 29 Mai 2014.

Gefügeauswirkungen und atomistische Vorgänge bei der Veredelung von Al-Si-Legierungen mit Sr, Ca und Yb

Peter, S., Li, J., Albu, M., Hofer, F., Ludwig, T. H. & Arnberg, L., 15 Mai 2014.

HR-STEM investigations of metallic nanoparticles grown with superfluid He-droplets

Knez, D., Volk, A., Thaler, P., Fisslthaler, E., Grogger, W., Ernst, W. & Hofer, F., 8 Mai 2014.

Universal scaling of surface plasmons modes

Schmidt, F., Ditzbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J. R., 8 Mai 2014.

Analysis of nanocrystals embedded in Co₃Ti made amorphous by severe plastic deformation

Noisternig, S., Ebner, C., Gammer, C., Rentenberger, C., Gspan, C., Hofer, F. & Karthaler, H. P., 2014, *Microscopy for Global Challenges*. , S. MS-4-P-5706

Atomic observation on the solute adsorption and antrainment during Si growth in Al-Si based alloys

Li, J., Albu, M., Hofer, F. & Schumacher, P., 2014, 14. *International Metallography conference*. , S. 1-1

Coupling edge plasmons on lithographed nanostructures

Schmidt, F., Ditzbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J., 2014.

Coupling edge plasmons on lithographed nanostructures

Schmidt, F., Ditzbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J. R., 2014, (Angenommen/In Druck) *Abstractbook 10 Jahre NAWI Graz*. .

Coupling Edge Plasmons on Lithographed Nanostructures

Schmidt, F., Ditzbacher, H., Hohenester, U., Hohenau, A., Hofer, F. & Krenn, J. R., 2014, *European Workshop on Spatially-Resolved Electron Spectroscopy*. , S. 31-31

EELS of nanocrystals embedded in Co₃Ti made amorphous by severe plastic deformation

Noisternig, S., Ebner, C., Gammer, C., Rentenberger, C., Gspan, C., Hofer, F. & Karthaler, H. P., 2014, *European Workshop on Spatially-Resolved Electron Spectroscopy*. , S. 28-28

Experimental evaluation of Environmental Scanning Electron Microscopes at high chamber pressure [200 - 4000 Pascal]

Rattenberger, J., Fitzek, H. M., Wagner, J., Schröttner, H. & Hofer, F., 2014.

Experimental evaluation of Environmental Scanning Electron Microscopes at high chamber pressure [200 - 4000 Pascal]
Rattenberger, J., Fitzek, H. M., Schröttner, H., Wagner, J. & Hofer, F., 2014, S. IT-6-P-2774.

Flexible Polymer/Copper Indium Sulfide Hybrid Solar Cells and Modules Based on the Metal Xanthate Route and Low Temperature Annealing

Fradler, C., Rath, T., Dunst, S., Letofsky-Papst, I., Saf, R., Kunert, B., Hofer, F., Resel, R. & Trimmel, G., 2014, in: *Solar Energy Materials and Solar Cells*. 124, S. 117-125

Formation of mono- and bi-metallic nanowires in vortices in superfluid He nanodroplets

Thaler, P., Volk, A., Lackner, F., Steurer, J., Knez, D., Grogger, W., Hofer, F. & Ernst, W., 2014, *64. Jahrestagung der Österreichischen Physikalischen Gesellschaft / Echophysics-Pöllau*. , S. 11-11

HR-STEM investigations of metallic nanoparticles grown with superfluid He-droplets

Knez, D., Volk, A., Thaler, P., Fisslthaler, E., Grogger, W., Ernst, W. & Hofer, F., 2014, *International Microscopy Congress*. , S. MS-1-O-2269

HR-STEM investigations of metallic nanoparticles grown with superfluid He-droplets

Knez, D., Volk, A., Thaler, P., Fisslthaler, E., Grogger, W., Ernst, W. & Hofer, F., 2014, *European Workshop on Spatially-Resolved Electron Spectroscopy*. , S. 23-23

HR-STEM investigations of metallic nanoparticles grown with superfluid He-droplets

Knez, D., Thaler, P., Volk, A., Grogger, W., Ernst, W. & Hofer, F., 2014, *64. Jahrestagung der Österreichischen Physikalischen Gesellschaft / Echophysics-Pöllau*. , S. 11-11

Impurity induced twinning in eutectic silicon

Albu, M., Gspan, C., Schumacher, P., Kothleitner, G. & Hofer, F., 2014, *European Workshop on Spatially-Resolved Electron Spectroscopy*. , S. 16-16

Impurity Induced Twinning in Eutectic Silicon

Albu, M., Gspan, C., Schumacher, J.-P., Kothleitner, G. & Hofer, F., 2014.

Linking TEM Analytical Spectroscopies for an Assumptionless Compositional Analysis

Kothleitner, G., Grogger, W., Dienstleder, M. & Hofer, F., 2014, in: *Microscopy and Microanalysis*. 20, 3, S. 676-686

Materialien für die lösungsbasierte Darstellung von CZTS Solarzellen

Harum, V., Buchmaier, C., Rath, T., Reichmann, A., Kunert, B., Edinger, S., Resel, R., Hofer, F., Dimopoulos, T. & Trimmel, G., 2014.

Modification of eutectic Si in Al-Si based alloys

Li, J., Albu, M., Ludwig, T. H., Matsubara, Y., Hofer, F., Arnberg, L., Tsunekawa, Y. & Schumacher, P., 2014, in: *Materials Science Forum*. 794-796, S. 130-136

Modification of eutectic Si in Al-Si based alloys

Li, J., Albu, M., Ludwig, T. H., Matsubara, Y., Hofer, F., Arnberg, L., Tsunekawa, Y. & Schumacher, P., 2014, *14th International Conference on Aluminium Alloys*. , S. 1-1

Morphing a Plasmonic Nanodisk into a Nanotriangle

Schmidt, F.-P., Dittbacher, H., Hofer, F., Krenn, J. R. & Hohenester, U., 2014, in: *Nano Letters*. 14, S. 4810-4815

Morphology study of CZTS formed at diverse annealing conditions using different precursor routes

Harum, V., Buchmaier, C., Rath, T., Müller, S., Reichmann, A., Kunert, B., Resel, R., Hofer, F., Dimopoulos, T. & Trimmel, G., 2014.

Multi-Scale-Analysis of Modern Aluminium-Alloys

Schröttner, H., Panzirsch, B., Albu, M., Mitsche, S., Gspan, C., Rattenberger, J., Wagner, J. & Hofer, F., 2014.

Multi-Scale-Analysis of Modern Aluminium-Alloys

Schröttner, H., Panzirsch, B., Albu, M., Mitsche, S., Mertschnigg, S., Gspan, C., Rattenberger, J., Wagner, J. & Hofer, F., 2014, S. MS-4-P-2525.

Nucleation kinetics of entrained eutectic Si in Al-5Si alloys

Li, J., Albu, M., Zarif, M. Z., McKay, B. J., Hofer, F. & Schumacher, P., 2014, in: *Acta Materialia*. 72, S. 80-98

Nucleation Kinetics of Entrained Eutectic Si in Al-5Si Alloys

Li, J., Albu, M., Ludwig, T. H., Hofer, F., Arnberg, L. & Schumacher, P., 2014, *4th International Conference on Advances in Solidification Processes - ICASP 4*. S. 1-1

Order vs. disorder — a huge increase in ionic conductivity of nanocrystalline LiAlO₂ embedded in an amorphous-like matrix of lithium aluminate

Wohlmuth, D., Epp, V., Bottke, P., Hanzu, I., Bitschnau, B., Letofsky-Papst, I., Kriechbaum, M., Amenitsch, H., Hofer, F. & Wilkening, M., 2014, in: *Journal of Materials Chemistry A*. 2, 47, S. 20295-20306

Quantitative Elemental Mapping at Atomic Resolution Using X-Ray Spectroscopy

Kothleitner, G., Neish, M. J., Lugg, N. R., Findlay, S. D., Grogger, W., Hofer, F. & Allen, L. J., 2014, in: *Physical Review Letters*. 112, 5 S., 085501.

Real time X-ray scattering study of the formation of ZnS nanoparticles using synchrotron radiation

Rath, T., Novak, J., Amenitsch, H., Pein, A., Maier, E., Haas, W., Hofer, F. & Trimmel, G., 2014, in: *Materials Chemistry and Physics*. 144, 3, S. 310-317

Removing the effects of elastic and thermal scattering from spectrum images in scanning transmission electron microscopy

Lugg, N. R., Neish, M. J., Haruta, M., Kothleitner, G., Grogger, W., Hofer, F., Kimoto, K., Mizoguchi, T., Findlay, S. D. & Allen, L. J., 2014, *Microscopy for Global Challenges*. , S. IT-16-P-2955

Revealing the precipitation in Al-Cu based alloys with Sc addition

Li, J., Albu, M., Hofer, F. & Schumacher, P., 2014, *Microscopy for Global Challenges*. , S. MS-4-P-1433

Silicon poisoning of La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_{3-δ} IT-SOFC cathodes

Bucher, E., Waldhäusl, J., Perz, M., Sitte, W., Gspan, C. & Hofer, F., 2014.

Silicon poisoning of La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_{3-δ} IT-SOFC cathodes

Bucher, E., Waldhäusl, J., Perz, M., Sitte, W., Gspan, C. & Hofer, F., 2014, *European Solid Oxide Fuel Cell Forum*. , S. B0610/1-B0610/5

Sputtering thin films for high resolution scanning electron microscopy

Rattenberger, J., Melischnig, A., Schröttner, H., Letofsky-Papst, I., Mertschnigg, S. & Hofer, F., 2014.

Strain effects induced by impurity atoms in eutectic silicon

Albu, M., Gspan, C., Li, P., Schumacher, J.-P., Kothleitner, G. & Hofer, F., 2014.

TEM-investigation of sulphur contamination on the SOFC material La_{0.6}Sr_{0.4}CoO₃

Gspan, C., Bucher, E., Sitte, W. & Hofer, F., 2014.

TEM-investigation of sulphur contamination on the SOFC material La_{0.6}Sr_{0.4}CoO₃

Gspan, C., Bucher, E., Sitte, W. & Hofer, F., 2014, *Microscopy for Global Challenges*. , S. MS-5-P-5729

Universal dispersion of surface plasmons in flat nanostructures

Schmidt, F.-P., Ditlbacher, H., Hohenester, U., Hohenau, A., Hofer, F. & Krenn, J. R., 2014, in: Nature Communications . 5 , 3604.

Universal scaling of surface plasmon modes

Schmidt, F., Ditlbacher, H., Hohenester, U., Hofer, F. & Krenn, J., 2014.

Universal scaling of surface plasmon modes

Schmidt, F. P., Ditlbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J. R., 2014, *Abstractbook 4th ASEM Workshop*.

Universal scaling of surface plasmon modes

Schmidt, F. P., Ditlbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J. R., 2014, *Abstractbook M&M 2014*.

What the Skin of a 1000-Year-old Peruvian Mummy tells

Pabst, M. A., Wilhelm, P., Letofsky-Papst, I., Bock, E., Simic, S., Spindler, K. & Hofer, F., 2014, *Yearbook of Mummy Studies*. 1 Aufl. München: Dr. Friedrich Pfeil, S. 181-191 (2).

Stability of solid oxide fuel cell cathodes in SO₂-containing atmospheres

Bucher, E., Sitte, W., Gspan, C. & Hofer, F., 25 Sept. 2013.

Metal Xanthates for the Synthesis of Metal Sulphide/Polymer Nanocomposites

Kaltenhauser, V., Rath, T., Haas, W., Torvisco Gomez, A., Hofer, F. & Trimmel, G., 23 Sept. 2013.

Towards quantitative elemental mapping at atomic resolution

Hofer, F., Kothleitner, G. & Grogger, W., 9 Sept. 2013.

Atomic resolution scanning transmission electron microscopy analysis of Sr and Yb addition in Al-Si alloys

Albu, M., Li, J., Schumacher, P., Kothleitner, G. & Hofer, F., 3 Sept. 2013.

Morphing nanodisks to triangles- A plasmonic EEL

Schmidt, F., Ditlbacher, H., Hohenau, A., Hohenester, U., Krenn, J. R. & Hofer, F., 25 Aug. 2013.

Rastertransmissionselektronenmikroskopie mit atomarer Auflösung

Hofer, F., Kothleitner, G., Grogger, W., Albu, M., Gspan, C. & Fisslthaler, E., 1 Juli 2013.

Comparing Efficiency and Stability of Conventional Cathodes with a Novel Silver Nanoparticle/Aluminum Cathode in Hybrid Solar Cells

Arar, M., Pein, A., Dunst, S., Haas, W., Hofer, F., Norrman, K., Krebs, F. C., Rath, T. & Trimmel, G., 16 Juni 2013.

From plasmonic film to edge modes

Schmidt, F., Ditlbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J. R., 25 Apr. 2013.

Preparation and Electron Microscopy of Graphene

Knez, D., Fisslthaler, E. & Hofer, F., 25 Apr. 2013.

Hochleistungskeramik für Festelektrolytbrennstoffzellen

Bucher, E., Preis, W., Sitte, W., Gspan, C. & Hofer, F., 16 Apr. 2013.

Atomic resolution scanning transmission electron microscopy analysis of Sr and Yb addition in Al-Si alloys

Albu, M., Li, J., Kothleitner, G., Schumacher, P. & Hofer, F., 2013, *Magnesium; Aluminium; Titanium Science and Technology*. , S. 162-162

Bismuth sulphide–polymer nanocomposites from a highly soluble bismuth xanthate precursor

Kaltenhauser, V., Rath, T., Haas, W., Torvisco Gomez, A., Müller, S., Friedel, B., Kunert, B., Saf, R., Hofer, F. & Trimmel, G., 2013, in: *Journal of Materials Chemistry C*. 1, 47, S. 7825-7832

Chemical tuning of PtC nanostructures fabricated via focused electron beam induced deposition

Plank, H., Haber, T., Gspan, C., Kothleitner, G. & Hofer, F., 2013, in: *Nanotechnology*. 24, 17, S. 175305-175313

Comparing Photovoltaic Parameters of Conventional Cathodes with a Novel Silver Nanoparticle/Aluminum Cathode in Polymer Based Solar Cells

Arar, M., Haas, W., Hofer, F., Rath, T. & Trimmel, G., 2013, *Conference Record of the 39th IEEE Photovoltaic Specialists Conference 2013*. , S. 3222-3225

Direct extreme UV-lithographic conversion of metal xanthates into nanostructured metal sulfide layers for hybrid photovoltaics

Rath, T., Padeste, C., Vockenhuber, M., Fradler, C., Edler, M., Reichmann, A., Letofsky-Papst, I., Hofer, F., Ekinci, Y. & Griesser, T., 2013, in: *Journal of Materials Chemistry A*. 1, 37, S. 11135-11140

Elektronenmikroskop der Superlative an der TU Graz

Hofer, F., Kothleitner, G. & Grogger, W., 2013, in: *TU Graz Research*. 2, S. 36-39

From plasmonic film to edge modes

Schmidt, F.-P., Ditzbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J. R., 2013, *Abstractbook 3rd ASEM-Workshop 2013*.

High resolution STEM analysis of Sr and Yb in Al - 5wt.% Si alloys

Albu, M., Li, J., Schumacher, P. & Hofer, F., 2013, *Instrumentation and Methods; Materials Science*. , S. 672-673

Influence of morphology and polymer:nanoparticle ratio on device performance of hybrid solar cells - an approach in experiment and simulation

Arar, M., Gruber, M., Edler, M., Haas, W., Hofer, F., Bansal, N., Reynolds, L. X., Haque, S. A., Zojer, K., Trimmel, G. & Rath, T., 2013, in: *Nanotechnology*. 24, 484005.

Influence of the bridging atom in fluorene analogue low-bandgap polymers on photophysical and morphological properties of copper indium sulfide/polymer nanocomposite solar cells

Jäger, M., Trattig, R., Postl, M., Haas, W., Kunert, B., Resel, R., Hofer, F., Klug, A., Trimmel, G. & List, E., 2013, in: *Journal of Polymer Science B*. 51, 19, S. 1400-1410

Mapping surface plasmons in the nanometer regime

Schmidt, F., Ditzbacher, H., Hohenester, U., Hofer, F. & Krenn, J., 2013.

Mapping surface plasmons in the nanometer regime

Schmidt, F.-P., Ditzbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J. R., 2013, *International Electron Energy Loss Spectroscopy Meeting on Enhanced Data Generated by Electrons (EDGE 2013): Final program and abstracts*. Toulouse: Centre d'Elaboration des Matériaux et d'Etudes Structurales

Morphing nanodisks to nanotriangles - a plasmonic EEL study

Schmidt, F., Ditzbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J. R., 2013, *MC 2013 Proceedings - Instrumentation and Methods; Materials Science*. Band Part 1. S. 409-410

Nanocomposite Tandem Solar Cells

Kaltenhauser, V., Edler, M., Rath, T., Reichmann, A., Haas, W., Hofer, F. & Trimmel, G., 2013.

Post-test analysis of silicon poisoning and phase decomposition in the SOFC cathode material $\text{La}_{0.58}\text{Sr}_{0.4}\text{Co}_{0.2}\text{Fe}_{0.8}\text{O}_{3-\delta}$ by transmission electron microscopy

Bucher, E., Gspan, C., Hofer, F. & Sitte, W., 2013, in: *Solid State Ionics*. 230, S. 7-11

Solution-processed copper zinc tin sulfide thin films from metal xanthate precursors

Fischereder, A., Schenk, A., Rath, T., Haas, W., Delbos, S., Gougaud, C., Naghavi, N., Pateter, A., Saf, R., Schenk, D., Edler, M., Bohnemann, K., Reichmann, A., Chernev, B. S., Hofer, F. & Trimmel, G., 2013, in: *Monatshefte für Chemie - Chemical Monthly*. 144, 3, S. 273-283

Solution-processed small molecule/copper indium sulfide hybrid solar cells

Rath, T., Kaltenhauser, V., Haas, W., Reichmann, A., Hofer, F. & Trimmel, G., 2013, in: *Solar Energy Materials and Solar Cells*. 114, S. 38-42

Sulphur poisoning of the SOFC cathode material $\text{La}_{0.6}\text{Sr}_{0.4}\text{CoO}_{3-\delta}$

Bucher, E., Gspan, C., Hofer, F. & Sitte, W., 2013, in: *Solid State Ionics*. 238, S. 15-23

X-ray microanalysis in the environmental or variable pressure scanning electron microscope

Rattenberger, J., Schröttner, H., Wagner, J. & Hofer, F., 2013.

X-ray microanalysis in the environmental or variable pressure scanning electron microscope

Rattenberger, J., Schröttner, H., Wagner, J. & Hofer, F., 2013, *Instrumentation and Methods; Materials Science.* ., S. 146-147

Synthesis of Copper Zinc Tin Chalcogenide Nanoparticles and their Thorough Characterization Regarding Chemical Composition

Rath, T., Haas, W., Pein, A., Pateter, A., Hofer, F., Resel, R. & Trimmel, G., 23 Nov. 2012.

Mapping surface plasmons on metal nanoparticles - from breathing modes to edge plasmons

Schmidt, F., Dittbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J. R., 14 Nov. 2012.

Copper Indium Sulphide / Polymer Nanocomposite Solar Cells

Rath, T., Arar, M., Pein, A., Fradler, C., Kaltenhauser, V., Edler, M., Moscher, S., Trattinig, R., List, E., Haas, W., Dunst, S., Hofer, F. & Trimmel, G., 25 Sept. 2012.

Full characterization of localized surface plasmons on a silver nanodisc

Schmidt, F., Dittbacher, H., Hohenester, U., Hofer, F. & Krenn, J. R., 16 Sept. 2012.

Synergies between EDX and EELS Chemical Analysis on a Probe Corrected STEM

Kothleitner, G., Fladischer, S., Grogger, W., Haber, T., Meingast, A. & Hofer, F., 16 Sept. 2012.

Towards atomic resolution STEM of energy-related materials

Hofer, F., Grogger, W., Kothleitner, G., Fisslthaler, E., Haas, W., Haber, T. & Schmidt, F., 3 Sept. 2012.

Improving functionality and resolution capabilities for electron beam induced Pt deposition processes

Plank, H., Schmied, R., Kolb, F., Gspan, C., Haber, T., Smith, D. A., Fowlkes, J., Rack, P. D., Kothleitner, G. & Hofer, F., 25 Juni 2012.

Minimization of unwanted proximity deposition during electron beam induced Pt deposition

Plank, H., Schmied, R., Kolb, F., Gspan, C., Haber, T., Smith, D. A., Rack, P. D., Fowlkes, J. D., Kothleitner, G. & Hofer, F., 18 Juni 2012.

Beam transfer characteristics of a low vacuum SEM

Rattenberger, J., Schröttner, H., Wagner, J. & Hofer, F., 12 Juni 2012.

Plasmonics - Using fast electrons to analyze surface plasmons

Schmidt, F., Ditzbacher, H., Hohenester, U., Hofer, F. & Krenn, J., 26 Apr. 2012.

A Direct In Situ-Preparation Route for Organic-Inorganic Hybrid Solar Cells Based on Metal Sulfides and Conjugated Polymers

Rath, T., Edler, M., Haas, W., Moscher, S., Pein, A., Kaltenhauser, V., Dunst, S., Arar, M., Fradler, C., Saf, R., Trattnig, R., Jäger, M., Postl, M., Seidl, M., Bansal, N., Haque, S. A., Hofer, F., List, E. & Trimmel, G., 2012.

Analysis of native structures of soft materials by cryo scanning probe tomography

Efimov, A. E., Gnaegi, H., Schaller, R., Grogger, W., Hofer, F. & Matsko, N., 2012, in: *Soft Matter*. 8, 38, S. 9756-9760

Comprehensive analysis of precipitates in rich chromium steels by means of electron energy loss spectrometry spectrum imaging

Albu, M., Mayr, P., Hofer, F. & Kothleitner, G., 2012, in: *Metallurgical Analysis*. 32, 12, S. 8-14

Comprehensive Investigation of Silver Nanoparticle/Aluminum Electrodes for Copper Indium Sulfide/Polymer Hybrid Solar Cells

Arar, M., Pein, A., Haas, W., Hofer, F., Norrman, K., Krebs, F. C., Rath, T. & Trimmel, G., 2012, in: *The Journal of Physical Chemistry C*. 116, 36, S. 19191-19196

Copper zinc tin sulfide (CZTS) solar cells prepared from solution processable metal xanthate precursors

Rath, T., Fischereder, A., Pateter, A., Schenk, A., Haas, W., Delbos, S., Gougoud, C., Naghavi, N., Saf, R., Edler, M., Hofer, F. & Trimmel, G., 2012.

Copper zinc tin sulfide layers prepared from solution processable metal dithiocarbamate precursors

Edler, M., Rath, T., Schenk, A., Fischereder, A., Haas, W., Edler, M., Chernev, B. S., Kunert, B., Hofer, F., Resel, R. & Trimmel, G., 2012, in: *Materials Chemistry and Physics*. 136, 2-3, S. 582-588

Dark Plasmonic Breathing Modes in Silver Nanodisks

Schmidt, F.-P., Ditzbacher, H., Hohenester, U., Hohenau, A., Krenn, J. R. & Hofer, F., 2012, in: *Nano Letters*. 12, 11, S. 5780-5783

EDX and EELS Chemical Analysis with a Probe Corrected STEM

Kothleitner, G., Fladischer, S., Grogger, W., Haber, T., Meingast, A. & Hofer, F., 2012, *Microscopy and Microanalysis*. .., S. 972-973

Effect of the TiO₂-modifications anatase and rutile on the solid-state synthesis of (Ba,Ca)TiO₃-based ceramics with PTCR

Sommitsch, C. (Herausgeber), Reichmann, K. (Herausgeber) & Hofer, F. (Herausgeber), 2012, 1 Aufl. Graz: Verlag der Technischen Universität Graz. (Advanced Materials Science)

Fill Factor Enhancement for PSiF-DBT/CIS Solar Cells through Silver-modified Aluminum Electrodes

Arar, M., Pein, A., Haas, W., Kaltenhauser, V., Fradler, C., Dunst, S., Hofer, F., Norrman, K., Krebs, F. C., Rath, T. & Trimmel, G., 2012.

Full characterization of localized surface plasmons on a silver

Schmidt, F., Ditzbacher, H., Hohenester, U., Hofer, F. & Krenn, J. R., 2012, *Physical Sciences: Applications*. .., Band Volume:1. S. 67-68

Fundamental Proximity Effects in Focused Electron Beam Induced Deposition

Plank, H., Smith, D. A., Rack, P. D., Hofer, F. & Haber, T., 2012, in: *ACS Nano*. 6, 1, S. 286-294

Improving efficiency, functionality and resolution capabilities of electron beam induced deposition processes

Plank, H., Schmied, R., Kolb, F., Gspan, C., Haber, T., Smith, D. A., Fowlkes, J., Rack, P. D., Kothleitner, G. & Hofer, F., 2012.

Improving efficiency, functionality and resolution capabilities of electron beam induced deposition processes

Plank, H., Schmied, R., Kolb, F., Gspan, C., Haber, T., Fowlkes, J., Smith, D. A., Rack, P. D., Kothleitner, G. & Hofer, F., 2012, *Physical Sciences: Tools and Techniques.* , S. 789-790

Investigation of CuInS₂ Thin Film Formation by a Low-Temperature Chemical Deposition Method

Fischereder, A., Rath, T., Haas, W., Schenk, D., Amenitsch, H., Zankel, A., Saf, R., Hofer, F. & Trimmel, G., 2012, in: *ACS Applied Materials & Interfaces.* 4, 1, S. 382-390

Kesterite Thin Films via the Thermal Decomposition of Metal Sulphide Precursors

Trimmel, G., Rath, T., Fischereder, A., Edler, M., Schenk, A., Pateter, A., Haas, W., Chernev, B. S., Delbos, S., Gougoud, C., Naghavi, N. & Hofer, F., 2012.

Mapping surface plasmons on metal nanoparticles - from breathing modes to edge plasmons

Schmidt, F., Dittbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J. R., 2012, *Abstractbook of MORE 2012.* , S. xx-xx

Mesoporous ZnS Thin Films Prepared by a Nanocasting Route

Fischereder, A., Martinez-Ricci, M. L., Wolosiuk, A., Haas, W., Hofer, F., Trimmel, G. & Soler-Illia, G. J. A. A., 2012, in: *Chemistry of Materials.* 24, 10, S. 1837-1845

Plasmonics - Mapping surface plasmons with fast electrons on metallic nanostructures

Schmidt, F.-P., Dittbacher, H., Hohenau, A., Hohenester, U., Hofer, F. & Krenn, J. R., 2012, *Abstractbook 2nd ASEM-Workshop 2012.*

Polymer / copper indium sulphide hybrid solar cells

Rath, T., Edler, M., Haas, W., Moscher, S., Trattnig, R., Jäger, M., Pein, A., Kaltenhauser, V., Dunst, S., Arar, M., Fradler, C., Saf, R., Postl, M., Seidl, M., Bansal, N., Haque, S. A., Hofer, F., List, E. & Trimmel, G., 2012.

Solution Based Routes towards Copper Indium Sulfide and Copper Zinc Tin Sulfide Layers for Photovoltaic Applications

Trimmel, G., Fischereder, A., Schenk, A., Strunz, E., Haas, W., Edler, M., Pein, A., Amenitsch, H., Saf, R., Hofer, F. & Rath, T., 2012.

Spherites provide elemental supply in overwintering Mollusca, Opiliones and Insecta

Lipovsek, S., Letofsky-Papst, I., Hofer, F., Pabst, M. A., Leitinger, G. & Novak, T., 2012, *Life Sciences.* , S. 13-14

Super-X: Characterization of new generation EDXS detector

Fladischer, S., Grogger, W. & Hofer, F., 2012.

Super-X: Characterization of new generation EDXS detector

Fladischer, S., Grogger, W. & Hofer, F., 2012, *Physical Sciences: Tools and Techniques.* , Band Volume 2. S. 683-684

Synergies between EDX and EELS Chemical Analysis on a Probe Corrected STEM

Kothleitner, G., Fladischer, S., Grogger, W., Haber, T., Meingast, A. & Hofer, F., 2012, *Physical Sciences: Tools and Techniques.* , Band Volume:2. S. 703-704

Synthesis and characterization of copper zinc tin chalcogenide nanoparticles: Influence of reactants on the chemical composition

Rath, T., Haas, W., Pein, A., Saf, R., Maier, E., Kunert, B., Hofer, F., Resel, R. & Trimmel, G., 2012, in: *Solar Energy Materials and Solar Cells.* 101, S. 87-94

Synthesis and luminescence studies of ultrafine grained Eu₂O₃:Y₂O₃ particles with a well defined structure

Brossmann, U., Kautsch, A., Krenn, H., Hofer, F. & Würschum, R., 2012.

The evidence on the degradation processes in the midgut epithelial cells of the larval antlion *Euroleon nostras* (Geoffroy in Fourcroy, 1785) (Myrmeliontidae, Neuroptera)

Lipovsek, S., Letofsky-Papst, I., Hofer, F., Leitinger, G. & Devetak, D., 2012, in: *Micron*. 43, S. 651-665

Towards atomic resolution STEM of energy-related materials

Hofer, F., Grogger, W., Kothleitner, G., Fisslthaler, E., Haas, W., Haber, T. & Schmidt, F., 2012, *YUCOMAT Annual Conference*. , S. 15-15

Towards single atom sensitivity in the analytical TEM

Grogger, W., Gspan, C., Fladischer, S., Kothleitner, G. & Hofer, F., 2012.

Towards single atom sensitivity in the analytical TEM

Grogger, W., Gspan, C., Fladischer, S., Kothleitner, G. & Hofer, F., 2012, *European Microscopy Congress*. , Band Volume:2. S. 685-686 (Physical Sciences: Tools and Techniques).

Untersuchung der Überstruktur und der Domänen am Perowskit $\text{La}_{0,4}\text{Sr}_{0,6}\text{CoO}_{2,71}$ mit einem Transmissionselektronenmikroskop

Sommitsch, C. (Herausgeber), Reichmann, K. (Herausgeber) & Hofer, F. (Herausgeber), 2012, 1 Aufl. Graz: Verlag der Technischen Universität Graz. (Advanced Materials Science)

Volcano effect in open through silicon via (TSV) technology

Kraft, J., Stückler, E., Cassidy, C., Niko, W., Schrank, F., Wachmann, E., Gspan, C. & Hofer, F., 2012, *2012 IEEE International Reliability Physics Symposium*. Piscataway, NY: Institute of Electrical and Electronics Engineers, S. PI2.1-PI2.5

Advanced Electron Microscopy of Complex Nanostructured Materials

Hofer, F., Fisslthaler, E., Grogger, W., Haas, W., Haber, T. & Kothleitner, G., 27 Okt. 2011.

PREPARATION OF METAL-SULFIDE – POLYMER NANOCOMPOSITES FOR PHOTOVOLTAIC APPLICATIONS

Rath, T., Fischereder, A., Edler, M., Moscher, S., Trattnig, R., Mauthner, G., List, E., Haas, W., Hofer, F. & Trimmel, G., 28 Sept. 2011.

Integration of an ultramicrotome and specially designed AFM for cryo serial section tomography of soft materials.

Matsko, N., Efimov, A. E., Gnaegi, H., Grogger, W. & Hofer, F., 4 Sept. 2011.

3D Reconstruction and 3D Imaging Techniques

Matsko, N., Efimov, A. E., Gnaegi, H., Grogger, W. & Hofer, F., 3 Sept. 2011.

Combination of a cryo-AFM with an ultramicrotome for serial section cryo-tomography of soft materials

Efimov, A., Gnaegi, H., Grogger, W., Hofer, F. & Matsko, N., 3 Sept. 2011.

Advances in quantitative EELS electron spectroscopy and imaging

Kothleitner, G., Riegler, K. & Hofer, F., 28 Aug. 2011.

Polymer Nanocomposite Solar Cells based on in-situ formed CuInS_2

Fradler, C., Rath, T., Edler, M., Fischereder, A., Moscher, S., Pein, A., Trattnig, R., Mauthner, G., List, E., Haas, W., Hofer, F. & Trimmel, G., 23 Aug. 2011.

Comprehensive Analysis of Precipitates in rich Cr Steels by Electron Energy loss Spectrometry Spectrum Imaging

Albu, M., Mayr, P., Kothleitner, G. & Hofer, F., 17 Mai 2011.

Preparation of Copper Zinc Tin Sulfide Layers for Photovoltaic Applications via Solution Based Routes

Rath, T., Fischereeder, A., Schenk, A., Haas, W., Amenitsch, H., Meischler, D., Edler, M., Saf, R., Hofer, F. & Trimmel, G., 12 Mai 2011.

A Novel Strategy to Maximize Deposition Efficiency and Electrical Conductivity for Electron Beam Induced Pt Deposition as a Gentle Alternative to Ion Beam Assisted Deposition

Plank, H., Michelitsch, S. G. W., Gspan, C., Krenn, J., Hohenau, A., Kothleitner, G. & Hofer, F., 24 Apr. 2011.

Investigations on the formation of metal sulphide-conjugated polymer nanocomposites for photovoltaic applications

Rath, T., Maier, E., Fischereeder, A., Haas, W., Hofer, F. & Trimmel, G., 6 März 2011.

ACR bündelt Kompetenz in der Materialcharakterisierung

Hofer, F., 2011, Austria Innovativ, S. 1-1.

Activation and Deactivation of a Chemical Transformation by an Electromagnetic Field: Evidence for Specific Microwave Effects in the Formation of Grignard Reagents**

Gutmann, B., Schwan, A. M., Reichart, B., Gspan, C., Hofer, F. & Kappe, C. O., 2011, in: Angewandte Chemie - International Edition . 33, S. 7636-7640

A Direct Route Towards Polymer/Copper Indium Sulfide Nanocomposite Solar Cells

Rath, T., Edler, M., Fischereeder, A., Moscher, S., Schenk, A., Pein, A., Meischler, D., Bartl, K., Saf, R., Trimmel, G., Haas, W., Sezen, M., Hofer, F., Mauthner, G., List, E., Bansal, N., Haque, S. A. & Trattnig, R., 2011, in: Advanced Energy Materials. 1, S. 1046-1050

Advances in quantitative EELS electron spectroscopy and imaging

Kothleitner, G., Riegler, K. & Hofer, F., 2011, *Microscopy Conference.* ., S. IM5-511

Analytical TEM discloses the chemical composition of copper zinc tin selenide nanoparticles

Haas, W., Rath, T., Haber, T., Trimmel, G. & Hofer, F., 2011.

Analytical TEM discloses the chemical composition of copper zinc tin selenide nanoparticles

Haas, W., Rath, T., Haber, T., Trimmel, G. & Hofer, F., 2011, *Microscopy Conference.* ., S. M1-P512

Application of Analytical Electron Microscopic Methods to Investigate the Function of Spherites in the Midgut of the Larval Antlion *Euroleon nostras* (Neuroptera: Myrmeleontidae)

Lipovsek, S., Letofsky-Papst, I., Hofer, F., Pabst, M. A. & Devetak, D., 2011, in: *Microscopy Research and Technique.* S. 1-11

A Smart Route towards CuInS₂ - Polymer Nanocomposite Solar Cells

Edler, M., Rath, T., Fischereeder, A., Moscher, S., Schenk, A., Pein, A., Haas, W., Hofer, F. & Trimmel, G., 2011.

Chemical (in)homogeneity of copper zinc tin selenide nanoparticles and resulting solar absorber layers

Haas, W., Rath, T., Haber, T., Trimmel, G. & Hofer, F., 2011.

Combination of a cryo-AFM with an ultramicrotome for serial section cryo-tomography of soft materials

Efimov, A. E., Gnaegi, H., Sevastyanov, V., Grogger, W., Hofer, F. & Matsko, N., 2011, *Multinational Congress on Microscopy.* ., S. 707-708

CuInS₂-Poly(3-(ethyl-4-butanoate)thiophene) nanocomposite solar cells: Preparation by an in situ formation route, performance and stability issues

Maier, E., Rath, T., Haas, W., Werzer, O., Saf, R., Hofer, F., Meissner, D., Volobujeva, O., Bereznev, S., Mellikov, E., Amenitsch, H., Resel, R. & Trimmel, G., 2011, in: *Solar Energy Materials and Solar Cells.* 95, 5, S. 1354-1361

CuInS₂ - Polymer Nanocomposite Solar Cells

Pein, A., Strunz, E., Haas, W., Hofer, F., Rath, T. & Trimmel, G., 2011.

CuInS₂-Polymer nanocomposite solar cells prepared via metal xanthate precursors

Trimmel, G., Fischereeder, A., Edler, M., Moscher, S., Trattnig, R., Mauthner, G., List, E., Haas, W., Hofer, F. & Rath, T., 2011.

Electron microscopy of nanoemulsions: An essential tool for characterisation and stability assessment

Klang, V., Matsko, N., Valenta, C. & Hofer, F., 2011, in: *Micron*. 43, S. 85-103

Influence of different interlayers on the performance of nanocomposite solar cells

Kaltenhauser, V., Rath, T., Dunst, S., Moscher, S., Pein, A., Haas, W., Hofer, F. & Trimmel, G., 2011.

Influence of Different Interlayers on the Performance of Nanocomposite Solar Cells

Trimmel, G., Kaltenhauser, V., Dunst, S., Rath, T., Moscher, S., Pein, A., Haas, W. & Hofer, F., 2011.

Integration of an ultramicrotome and specially designed AFM for cryo serial section tomography of soft materials.

Efimov, A. E., Gnaegi, H., Haynl, I., Sevastyanov, V., Grogger, W., Hofer, F. & Matsko, N., 2011, *Multinational Congress on Microscopy*. , S. 81-81

Investigation of the Formation of CuInS₂ Nanoparticles by the Oleylamine Route: Comparison of Microwave-Assisted and Conventional Syntheses

Pein, A., Baghbanzadeh, M., Rath, T., Haas, W., Maier, E., Amenitsch, H., Hofer, F., Kappe, O. & Trimmel, G., 2011, in: *Inorganic Chemistry*. 50, 1, S. 193-200

Mapping plasmons of designed nanostructures with an ebeam

Schmidt, F., Dittbacher, H., Hofer, F. & Krenn, J., 2011.

Metal sulfide-polymer nanocomposite thin films prepared by a direct formation route for photovoltaic applications

Maier, E., Fischereeder, A., Haas, W., Mauthner, G., Albering, J., Rath, T., Hofer, F., List, E. & Trimmel, G., 2011, in: *Thin Solid Films*. 519, S. 4201-4206

Metal xanthates as precursors for efficient solution processed CuInS₂-polymer nanocomposite solar cells

Rath, T., Fischereeder, A., Edler, M., Moscher, S., Trattnig, R., Mauthner, G., Haas, W., Dunst, S., Hofer, F., List, E. & Trimmel, G., 2011.

Nanotechnologie Steiermark: Einblicke in die allerkleinsten Dimensionen

Hofer, F., 2011, in: *TÜV-Times*. 3, S. 16-17

Novel Preparation Methods for Cu₂ZnSnS₄ Layers for Photovoltaic Applications

Fischereeder, A., Rath, T., Schenk, A., Haas, W., Amenitsch, H., Meischler, D., Edler, M., Saf, R., Hofer, F. & Trimmel, G., 2011.

Optimization of postgrowth electron-beam curing for focused electron-beam-induced Pt deposits

Plank, H., Kothleitner, G., Hofer, F., Michelitsch, S. G. W., Gspan, C., Hohenau, A. & Krenn, J., 2011, in: *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*. 29, 5, S. 051801-1-051801-7

Real Time Study of The Formation of ZnS Nanoparticles

Novak, J., Rath, T., Pein, A., Fischereeder, A., Haas, W., Amenitsch, H., Hofer, F. & Trimmel, G., 2011.

Solution based routes towards copper zinc tin sulfide layers for photovoltaic applications

Rath, T., Fischereeder, A., Schenk, A., Haas, W., Edler, M., Meischler, D., Saf, R., Hofer, F. & Trimmel, G., 2011.

Structural and optical properties of nanoparticulate Y₂O₃:Eu₂O₃ made by microwave plasma synthesis

Kautsch, A., Brossmann, U., Krenn, H., Hofer, F., Szabo, D. V. & Würschum, R., 2011, in: Applied Physics A: Materials Science and Processing. 105, 3, S. 709-712

The Stoichiometry of Single Nanoparticles of Copper Zinc Tin Selenide

Haas, W., Rattenberger, J., Rath, T., Pein, A., Trimmel, G. & Hofer, F., 2011, in: Chemical Communications. 47, S. 2050-2052

Transmission Electron Microscopy of Nanostructured Materials

Hofer, F., Albu, M., Grogger, W., Haas, W., Haber, T. & Kothleitner, G., 2011, *Multinational Congress on Microscopy.* , S. 483-484

ACR-Woman Award für Nadejda Matsko

Hofer, F., 1 Dez. 2010, TU Graz People, S. 9-9.

Convergent-Beam Electron Diffraction and Quantitative Electron Diffraction for Structure Analysis

Gspan, C., Grogger, W. & Hofer, F., 29 Nov. 2010.

Correlative AFM -TEM microscopy and spectroscopy

Matsko, N., Letofsky-Papst, I., Znidarsic, N., Strus, J., Grogger, W. & Hofer, F., 19 Sept. 2010.

Copper zinc tin sulfide and selenide nanoparticles: chemical analysis on the single particle level

Haas, W., Rath, T., Trimmel, G. & Hofer, F., 13 Sept. 2010.

Biocalcification. Correlative AFM and EM microscopy and

Matsko, N., Znidarsic, N., Letofsky-Papst, I., Strus, J., Dittrich, M., Grogger, W. & Hofer, F., 1 Sept. 2010.

Raman microprobe imaging of submicron structures and interdisciplinary characterization of beam damage

Wilhelm, P., Chernev, B. S., Plank, H., Sezen, M., Dienstleder, M. & Hofer, F., 29 Aug. 2010.

The Influence of Preparation Parameters during Electron Beam Induced Deposition on Chemistry, Structure and Volume Growth Rate of Pt

Plank, H., Haber, T., Gspan, C., Kothleitner, G. & Hofer, F., 13 Juli 2010.

Comparison of EFTEM and STEM EELS plasmon imaging of gold nanoparticles in a monochromated TEM

Schaffer, B., Grogger, W., Kothleitner, G. & Hofer, F., 1 Juli 2010, in: Ultramicroscopy. 110, 8, S. 1087-1093 7 S.

The Influence of Preparation Parameters during Electron Beam Induced Deposition on Chemistry, Structure and Volume Growth Rate of Pt

Plank, H., Haber, T., Gspan, C., Kothleitner, G. & Hofer, F., 27 Juni 2010.

New Nanocomposite Solar Cells prepared by an In-Situ Formation Process

Larissegger, S., Maier, E., Rath, T., Fischereder, A., Edler, M., Haas, W., Moscher, S., Mauthner, G., List, E., Hofer, F., Meissner, D. & Trimmel, G., 5 Apr. 2010.

Investigation of Cu₂ZnSnS₄ formation from metals salts and thioacetamide

Fischereder, A., Haas, W., Rath, T., Amenitsch, H., Albering, J., Meischler, D., Larissegger, S., Edler, M., Saf, R., Hofer, F. & Trimmel, G., 2 Apr. 2010.

FELMI goes 3-D

Hofer, F., 1 Apr. 2010, TU Graz People, S. 15-15.

Advanced microscopic techniques for imaging carbides in ferritic steels

Parameswaran, P., Hofer, F., Chong, R., Borkowski, R. E. D. & Midgley, P. A., 2010, *Pressure Vessels and Piping*. 1 Aufl. New Delhi: Narosa Publishing House, Band Volume2. S. 561-568 (Materials and Properties).

Application of Nanocomposite Layers Consisting of Electroactive Polymers and Copper Indium Disulfide Nanoparticles in Hybrid Photovoltaics

Rath, T., Maier, E., Edler, M., Haas, W., Santis Alvarez, A., Amenitsch, H., Hofer, F. & Trimmel, G., 2010.

Architecture of the Crustacean Cuticle

Matsko, N., Znidarsic, N., Tusek Znidaric, M., Strus, J., Letofsky-Papst, I., Grogger, W. & Hofer, F., 2010, in: *Imaging & Microscopy*. 12, 3, S. 23-25

Biom mineralization: Correlative AFM –TEM microscopy and spectroscopy.

Matsko, N., Letofsky-Papst, I., Znidarsic, N., Strus, J., Grogger, W. & Hofer, F., 2010, *Revealing the Nanoworld in Life and Materials Science*. , S. CD-CD

Chitin: Correlative AFM TEM microscopy and spectroscopy

Matsko, N., Znidarsic, N., Letofsky-Papst, I., Strus, J., Grogger, W. & Hofer, F., 2010, in: *Imaging & Microscopy*. 2, S. 40-40

Comparison of EFTEM and STEM EELS plasmon imaging of gold nanoparticles in a monochromated TEM

Schaffer, B., Grogger, W., Kothleitner, G. & Hofer, F., 2010, in: *Ultramicroscopy*. 110, S. 1087-1093

Different staining substances were used in decorative and therapeutic tattoos in a 1000-year-old Peruvian mummy

Pabst, M.-A., Letofsky-Papst, I., Wilhelm, P., Moser, M., Spindler, K., Bock, E., Dorfer, L., Geigl, J. B., Auer, M., Speicher, M. R. & Hofer, F., 2010, in: *Journal of archaeological science*. 37, S. 3256-3262

Handbuch der Nanoanalytik Steiermark 2010

Psutka, S. (Herausgeber) & Hofer, F. (Herausgeber), 2010, Graz: .

Investigation of Cu₂ZnSnS₄ Formation from Metal Salts and Thioacetamide

Fischereder, A., Rath, T., Haas, W., Amenitsch, H., Albering, J., Meischler, D., Larissegger, S., Edler, M., Saf, R., Hofer, F. & Trimmel, G., 2010, in: *Chemistry of Materials*. 22, S. 3399-3409

Microscopy and Microanalysis of Cerium Oxide Grain Boundaries

Winterstein, J., Carter, C. B., Grogger, W. & Hofer, F., 2010, in: *Microscopy and Microanalysis*. 15, suppl.2, S. 1416-1417

Modelling and Simulation of Strengthening in Complex Martensitic 9-12% Cr Steel and a Binary Fe-Cu Alloy

Holzer, I., Sommitsch, C. (Herausgeber), Reichmann, K. (Herausgeber) & Hofer, F. (Herausgeber), 2010, 1 Aufl. Graz: Verlag der Technischen Universität Graz. (Monographic series TU Graz : Advanced materials science ; Band 2)

Numerical Simulation of the Precipitation Kinetics of Nitrides and Carbides in Microalloyed Steel

Radis, R., Sommitsch, C. (Herausgeber), Reichmann, K. (Herausgeber) & Hofer, F. (Herausgeber), 2010, 1 Aufl. Graz: Verlag der Technischen Universität Graz. (Monographic series TU Graz : Advanced materials science ; Band 3)

Organic-Inorganic Hybrid Solar Cells Based on Metal Sulfides and Electroactive Polymers

Trimmel, G., Rath, T., Fischereder, A., Maier, E., Albering, J., Haas, W., Hofer, F., Mauthner, G., List, E. & Meissner, D., 2010.

Performance Report 2007/08

Hofer, F. (Herausgeber), 2010, Graz: .

Polymer - CuInS₂ hybrid solar cells obtained by an in-situ formation route

Maier, E., Haas, W., Santis Alvarez, A., Rath, T., Hofer, F., Stelzer, F. & Trimmel, G., 2010.

Polymer - CuInS₂ hybrid solar cells obtained by an in-situ formation route

Maier, E., Haas, W., Santis Alvarez, A., Rath, T., Hofer, F., Stelzer, F. & Trimmel, G., 2010, *Photovoltaic Specialists Conference (PVSC), 2010 35th IEEE.* , S. 003365 -003368

Preparation of Copper Zinc Tin Sulfide Layers for Photovoltaic Applications

Rath, T., Fischereder, A., Haas, W., Amenitsch, H., Maier, E., Albering, J., Meischler, D., Edler, M., Saf, R., Hofer, F. & Trimmel, G., 2010.

Raman microprobe imaging of submicron polymer structures and interdisciplinary characterization of beam damage

Plank, H., Chernev, B. S., Sezen, M., Dienstleder, M., Haber, T., Wilhelm, P. & Hofer, F., 2010.

Silicon: The key element in early stages of biocalcification

Matsko, N., Znidarsic, N., Letofsky-Papst, I., Dittrich, M., Grogger, W., Strus, J. & Hofer, F., 2010, in: *Journal of structural biology.* 174, S. 180-186

Structure and luminescence properties of Eu-doped Y₂O₃ nano-particles prepared by Microwave Plasma Synthesis

Kautsch, A., Brossmann, U., Krenn, H., Hofer, F. & Würschum, R., 2010.

Various Metal Sulfides as Acceptor Phase in Inorganic/Organic Hybrid Photovoltaics prepared by an in-Situ Formation Process

Edler, M., Fischereder, A., Maier, E., Rath, T., Haas, W., Mauthner, G., Albering, J., Hofer, F., List, E. & Trimmel, G., 2010

Zentrum für Elektronenmikroskopie Graz

Hofer, F., 2010, *Forschung in der Steiermark.* Wissenschaftsbericht 2009/10 Aufl. Graz: , S. 302-304

Zur Theorie der Gefügeänderungen in Metallen: Verfestigung, Erholung, Korngrenzenbewegung und Rekristallisation

Sommitsch, C., Reichmann, K. (Herausgeber), Hofer, F. (Herausgeber) & Mitter, W., 2010, 1 Aufl. Graz: Verlag der Technischen Universität Graz. (Monographic Series TU Graz : Advanced material science)

Application of Nanocomposite Layers consisting of Electroactive Polymers and Sulfidic Nanoparticles in Hybrid Photovoltaics

Rath, T., Maier, E., Fischereder, A., Edler, M., Haas, W., Fradler, C., Moscher, S., Larissegger, S., Santis Alvarez, A., Meischler, D., Saf, R., Mauthner, G., List, E., Hofer, F. & Trimmel, G., 19 Okt. 2009.

Growth Characteristics of Electron Beam Induced Deposition

Plank, H., Haber, T., Gspan, C., Kothleitner, G. & Hofer, F., 2 Okt. 2009.

Structural and mechanical characterization of chitin using correlative AFM-TEM microscopy and spectroscopy

Matsko, N., Znidarsic, N., Strus, J., Grogger, W. & Hofer, F., 30 Aug. 2009.

Application of Nanocomposite Layers of Sulfidic Nanoparticles and Electroactive Polymers in Hybrid Photovoltaics

Rath, T., Maier, E., Larissegger, S., Fischereder, A., Edler, M., Haas, W., Fradler, C., Moscher, S., Santis Alvarez, A., Saf, R., Mauthner, G., List, E., Hofer, F. & Trimmel, G., 12 Juli 2009.

How to Maximize the Volume Growth Rates for Electron Beam Induced Deposition Processes

Plank, H., Kothleitner, G. & Hofer, F., 29 Juni 2009.

The Effect of FIB Process Parameters on the Surface Morphology of Thin Lamellas

Dienstleder, M., Plank, H., Gspan, C., Kothleitner, G. & Hofer, F., 29 Juni 2009.

Hybrid Photovoltaic Cells via a Novel Direct Route

Maier, E., Edler, M., Fischereeder, A., Fradler, C., Haas, W., Hofer, F., Larissegger, S., Mauthner, G., Meischler, D., Pein, A., Rath, T., Saf, R., Santis Alvarez, A., Trattinig, R., Stelzer, F., List, E. & Trimmel, G., 26 Juni 2009.

High resolution imaging of surface plasmons by EFTEM

Hofer, F. & Schaffer, B., 18 Mai 2009.

Controlling Structure, Chemistry, and Morphology of Free Standing Platinum Nanorods via Process Parameters During Electron Beam Induced Deposition

Plank, H., Haber, T., Gspan, C., Kothleitner, G. & Hofer, F., 12 Apr. 2009.

High resolution imaging of surface plasmons by transmission electron microscopy

Hofer, F., Grogger, W., Kothleitner, G. & Schaffer, B., 12 März 2009.

Grazer Wissenschaftlern gelingt Durchbruch in der Nano-Optik

Hofer, F., 1 März 2009, Physik AT, S. 15-15.

With electrons you see better

Hofer, F., 1 Jan. 2009, Hightech - World Champion Austria, S. 81-81.

Analytical TEM of an Al-Mn-Be-Cu alloy

Rozman, N., Zupanic, F., Boncina, T., Grogger, W., Gspan, C. & Hofer, F., 2009, *Materials Science*. Wien: Facultas, S. 205-206

Comparison of Binary and Ternary Metal Sulfides as Acceptor Phase in Inorganic/Organic Hybrid Photovoltaics prepared by an In-situ Formation Process.

Edler, M., Fischereeder, A., Maier, E., Rath, T., Haas, W., Hofer, F. & Trimmel, G., 2009.

Comparison of Metal Sulfides in Organic - Inorganic Nanocomposite Solar Cells by and In-Situ Formation Process

Fischereeder, A., Maier, E., Dunst, S., Rath, T., Haas, W., Albering, J., Hofer, F. & Trimmel, G., 2009.

Controlling Chemistry, Structure and Volume Growth Rate via Process Parameters of Electron Beam Induced Deposition

Plank, H., Haber, T., Gspan, C., Kothleitner, G. & Hofer, F., 2009.

Controlling Chemistry, Structure and Volume Growth Rate via Process Parameters of Electron Beam Induced Deposition

Plank, H., Haber, T., Gspan, C., Kothleitner, G. & Hofer, F., 2009, *Materials Science*. Wien: Facultas, S. 101-102

Direct Formation of Sulfidic Nanoparticles in Semiconducting Organic Matrices for Hybrid Photovoltaics

Trimmel, G., Maier, E., Rath, T., Larissegger, S., Fischereeder, A., Edler, M., Haas, W., Fradler, C., Moscher, S., Santis Alvarez, A., Saf, R., Mauthner, G., List, E. & Hofer, F., 2009.

Electron microscopy as a tool for morphology control in nanocomposite solar cells

Haas, W., Zankel, A., Rath, T., Maier, E., Santis Alvarez, A., Fischereeder, A., Trimmel, G. & Hofer, F., 2009.

Electron microscopy as a tool for morphology control in nanocomposite solar cells

Haas, W., Zankel, A., Rath, T., Maier, E., Santis Alvarez, A., Fischereeder, A., Trimmel, G. & Hofer, F., 2009, *Materials Science*. Wien: Facultas, S. 191-192

High resolution imaging of surface plasmons by transmission electron microscopy

Hofer, F., Grogger, W., Kothleitner, G. & Schaffer, B., 2009, *Nano and Photonics 2009*. , S. 14-14

High-resolution surface plasmon imaging of gold nanoparticles by energy-filtered transmission electron microscopy
Schaffer, B., Hohenester, U., Trügler, A. & Hofer, F., 2009, in: *Physical Review B*. 79, 4, S. 041401-1-041401-4

Integration of a cryo ultramicrotome and a specially designed cryo AFM to study soft polymers and biological systems
Efimov, A., Sevastyanov, V., Grogger, W., Hofer, F. & Matsko, N., 2009, *Life Sciences*. Wien: Facultas, S. 25-26

Monochromated, spatially resolved electron energy-loss spectroscopic measurements of gold nanoparticles in the plasmon range
Schaffer, B., Riegler, K., Kothleitner, G., Grogger, W. & Hofer, F., 2009, in: *Micron*. 40, S. 269-273

Nanoarchitecture of the crustacean cuticle - visualization and analysis by a combined use of TEM, AFM and light microscopy
Znidarsic, N., Matsko, N., Tusek Znidaric, M., Grogger, W., Hofer, F. & Strus, J., 2009, *Life Sciences*. Wien: Facultas, S. 359-360

Organic-inorganic semiconductor blends for photovoltaic applications
Rath, T., Maier, E., Edler, M., Fischereder, A., Larissegger, S., Pein, A., Haas, W., Mauthner, G., Hofer, F., List, E. & Trimmel, G., 2009.

Organic-inorganic semiconductor blends for photovoltaic applications
Larissegger, S., Rath, T., Maier, E., Edler, M., Fischereder, A., Pein, A., Haas, W., Hofer, F., List, E., Trimmel, G. & Mauthner, G., 2009.

Preparation and Characterization of Metal Sulfides/ Polymer Nanocomposite Solar Cells
Fischereder, A., Maier, E., Rath, T., Haas, W., Hofer, F., List, E. & Trimmel, G., 2009.

Proceedings MC 2009, Vol. 3: Materials Science
Grogger, W. (Herausgeber), Hofer, F. (Herausgeber) & Pölt, P. (Herausgeber), 2009, 1 Aufl. Wien: Facultas.

Spherules and nanotubules involved in elaboration of crustacean cuticle during the molt cycle: A correlative TEM-AFM study
Strus, J., Znidarsic, N., Tusek Znidaric, M., Grogger, W., Hofer, F. & Matsko, N., 2009, *Life Sciences*. W: Facultas, S. 301-302

Structural and mechanical characterization of chitin using correlative AFM-TEM microscopy and spectroscopy
Matsko, N., Znidarsic, N., Strus, J., Grogger, W. & Hofer, F., 2009, *Life Sciences*. Wien: Facultas, S. 299-300

Structure correlated ELNES investigation of the O K ionization edge in La-Sr-Co oxides
Gspan, C., Grogger, W., Kothleitner, G. & Hofer, F., 2009.

Structure of the Malpighian tubule cells and annual changes in the structure and chemical composition of their spherites in the cave cricocket *Troglophilus neglectus* Krauss, 1878
Lipovsek Delakorda, S., Letofsky-Papst, I., Novak, T., Hofer, F. & Pabst, M. A., 2009, in: *Arthropod Structure & Development*. 38, 4, S. 315-327

The change of oxygen vacancy ordering in a nonstoichiometric La-Sr-Co-perovskite during TEM investigation
Gspan, C., Grogger, W., Bucher, E., Sitte, W. & Hofer, F., 2009.

The change of oxygen vacancy ordering in a nonstoichiometric La-Sr-Co-perovskite during TEM investigation
Gspan, C., Grogger, W., Bucher, E., Sitte, W. & Hofer, F., 2009, *Materials Science*. Wien: Facultas, S. 309-310

The Effect of Process Parameters on the Surface Morphology of Thin FIB Lamellas

Dienstleder, M., Plank, H., Gspan, C., Kothleitner, G. & Hofer, F., 2009.

The Effect of Process Parameters on the Surface Morphology of Thin FIB Lamellas

Dienstleder, M., Plank, H., Gspan, C., Kothleitner, G. & Hofer, F., 2009, *Instrumentation and Methodology*. Wien: Facultas, S. 253-254 (Instrumentation and Methodology).

The structure and the chemical composition of the spherites in the cave cricket *Troglophilus neglectus* (Rhaphidophoridae, Saltatoria)

Lipovsek, S., Letofsky-Papst, I., Novak, T., Hofer, F. & Pabst, M. A., 2009, *Life Sciences*. Wien: Facultas, S. 295-296

The tattoos of the Tyrolean Iceman: a light microscopical, ultrastructural and element analytical study

Pabst, M. A., Letofsky-Papst, I., Bock, E., Moser, M., Dorfer, L., Egarter-Vigl, E. & Hofer, F., 2009, in: *Journal of archaeological science*. 36, S. 2335-2341

Seeing the Invisible

Plank, H. & Hofer, F., 28 Nov. 2008.

Seeing the Invisible – Beyond Microscopy

Plank, H. & Hofer, F., 27 Nov. 2008.

A novel method for precipitates preparation using replica extraction combined with focused ion beam techniques

Dienstleder, M., Plank, H., Gspan, C., Kothleitner, G. & Hofer, F., 1 Sept. 2008.

Process Parameters for Particle Induced Deposition

Plank, H., Gspan, C., Dienstleder, M., Kothleitner, G. & Hofer, F., 3 Juli 2008.

Low-loss EELS with monochromated electrons

Hofer, F., Grogger, W., Kothleitner, G. & Schaffer, B., 8 Juni 2008.

Nanoanalytik für die Halbleitertechnologie

Hofer, F., 1 Apr. 2008, Report (+) Plus / Innovations-Report, S. 15-15.

Crystal structure of $\text{La}_{0.4}\text{Sr}_{0.6}\text{CoO}_{2.71}$ investigated by TEM and XRD

Gspan, C., Grogger, W., Bitschnau, B., Bucher, E., Sitte, W. & Hofer, F., 29 Jan. 2008.

An introduction to high resolution EELS in transmission electron microscopy

Grogger, W., Hofer, F., Kothleitner, G. & Schaffer, B., 2008, in: *Topics in catalysis*. 50, S. 200-207

A novel method for precipitates preparation using extraction replicas combined with focused ion beam techniques

Dienstleder, M., Plank, H., Kothleitner, G. & Hofer, F., 2008, *European Microscopy Congress*. Berlin: Springer, Band Volum1. S. 807-809 (Instrumentation and Methods).

Application of elemental microanalysis to elucidate the role of spherites in the digestive gland of the helcid snail *Chilostoma lefeburi*

Lipovsek Delakorda, S., Letofsky-Papst, I., Novak, T., Giovannelli, M., Hofer, F. & Pabst, M. A., 2008, in: *Journal of Microscopy*. 231, Pt1, S. 38-46

Application of high-resolution EFTEM SI in an AEM

Schaffer, B., Grogger, W., Kothleitner, G. & Hofer, F., 2008, in: *Analytical and Bioanalytical Chemistry*. S. 1439-1445

Crystal structure of $\text{La}_{0.4}\text{Sr}_{0.6}\text{CoO}_{2.71}$ investigated by TEM and XRD

Gspan, C., Grogger, W., Bitschnau, B., Bucher, E., Sitte, W. & Hofer, F., 2008, in: *Journal of Solid State Chemistry*. S. 2976-2982

Development of an Al-Mn-Be-Cu alloy with improved quasicrystalline forming ability

Zupanic, F., Boncina, T., Rozman, I., Anzel, I., Grogger, W., Gspan, C., Hofer, F. & Markoli, B., 2008, in: Zeitschrift für Kristallographie. 223, S. 735-738

Fourier-ratio deconvolution and its Bayesian equivalent

Egerton, R., Wang, F., Malac, M., Moreno, M. S. & Hofer, F., 2008, in: Micron. 39, 6, S. 642-647

Hyperspectral imaging in TEM: New ways of information extraction and display

Schaffer, B., Gspan, C., Grogger, W., Kothleitner, G. & Hofer, F., 2008, in: Microscopy and Microanalysis. 14, 2, S. 70-71

Low-loss EELS with monochromated electrons

Hofer, F., Grogger, W., Kothleitner, G. & Schaffer, B., 2008, *International Conference on Electron Microscopy.* .. S. 1-1

The influence of beam defocus on volume growth rates for electron beam induced platinum deposition

Plank, H., Gspan, C., Dienstleder, M., Kothleitner, G. & Hofer, F., 2008, in: Nanotechnology. 19, 48, S. 485302-485311

The influence of beam defocus on volume growth rates for electron beam induced platinum deposition

Plank, H., Dienstleder, M., Kothleitner, G. & Hofer, F., 2008, *European Microscopy Congress.* Berlin: Springer, Band Volume1. S. 683-684 (Instrumentation and Methods).

The Influence of Beam Defocus on Volume Growth Rates for Electron Beam Induced Platinum Deposition

Plank, H., Gspan, C., Dienstleder, M., Kothleitner, G. & Hofer, F., 2008.

Vorsprung in den Materialwissenschaften

Hofer, F. & Reichmann, K., 2008, in: Forschungsjournal der Technischen Universität Graz. S. 10-15

Applied Nanoanalysis by Electron Energy-Loss Spectrum Imaging Methods

Schaffer, B., Grogger, W., Kothleitner, G. & Hofer, F., 2 Sept. 2007.

Low-loss EELS Measurements with Monochromated Electrons

Hofer, F., Kothleitner, G., Grogger, W. & Schaffer, B., 2 Sept. 2007.

Cooperation between Austrian Co-operative Research and the Slovak Academy of Science in the field of advanced materials

Hofer, F. & Lences, Z., 22 Aug. 2007.

Nanoanalysis in Materials Science using Spectrum Imaging Methods

Grogger, W., Kothleitner, G., Schaffer, B. & Hofer, F., 17 Juni 2007.

Recent Developments in HR-EELS and EFTEM

Kothleitner, G., Schaffer, B., Grogger, W. & Hofer, F., 17 Juni 2007.

Recent Advances in FIB Specimen Preparation and Nanostructuring

Rogers, M. & Hofer, F., 16 Juni 2007.

High energy resolution EFTEM series in the low-loss regime

Hofer, F., Grogger, W., Schaffer, B. & Kothleitner, G., 7 März 2007.

Advanced Nanoanalysis in Transmission Electron Microscopy

Grogger, W., Schaffer, B., Gspan, C., Rechberger, W., Kothleitner, G. & Hofer, F., 2007, *Probing the Nanoworld - Lecture Manuscripts of the 38th Spring School 2007.* .., Band 34. S. B3-B3 (Schriften des Forschungszentrum Jülich : Materie und Material).

Applied Nanoanalysis by Electron Energy-Loss Spectrum Imaging Methods

Schaffer, B., Grogger, W., Kothleitner, G. & Hofer, F., 2007, *Microscopy & Microanalysis*, 13/Suppl.3. ., S. 432-433

Charakterisierung und Schadensanalyse von Baustoffen mit Hilfe der Rasterelektronenmikroskopie

Reichmann, A., Pölt, P. & Hofer, F., 2007, in: *Zement, Beton*. 1, S. 34-37

Comparison between stoichiometric and nonstoichiometric LaSrCo-oxides by analytical TEM

Gspan, C., Grogger, W., Hofer, F., Bucher, E. & Sitte, W., 2007.

Comparison between stoichiometric and nonstoichiometric LaSrCo-oxides by analytical TEM

Gspan, C., Grogger, W., Hofer, F., Bucher, E. & Sitte, W., 2007, *Microsc. Microanal. Vol. 13 Suppl. 3 (2007)*. ., S. 354-354

Inter-wire antiferromagnetic exchange interaction in Ni/Si-ferromagnetic/semiconductor nanocomposites

Granitzer, P., Rumpf, K., Hofmayer, M., Pölt, P., Reichmann, A. & Hofer, F., 2007, *AIP conference proceedings, Vol. 893*. ., S. 1237-1238

L4-6 Tattooed skin areas of the Tyrolean Iceman – An ultrastructural and element analytical investigation

Pabst, M. A., Letofsky-Papst, I., Bock, E., Moser, M., Dorfer, L., Egarter-Vigl, E. & Hofer, F., 2007, *Multinational Congress on Microscopy*. ., S. 385-386

Low-loss EELS Measurements with Monochromated Electrons

Kothleitner, G., Grogger, W., Hofer, F. & Schaffer, B., 2007, *Microscopy and Microanalysis*. ., S. 82-83

LP-32 Characterization of spherites in the digestive gland of the snail *Chilostoma lefeburiana*: an analytical electron microscopic study

Lipovsek, S., Letofsky-Papst, I., Novak, T., Hofer, F., Giovannelli, M., Simunovic, M. & Pabst, M. A., 2007, *Multinational Congress on Microscopy*. ., S. 493-494

Nanoanalysis in Materials Science using Spectrum Imaging Methods

Grogger, W., Kothleitner, G., Schaffer, B. & Hofer, F., 2007, *Proceedings of 8th Multinational Congress on Microscopy, Prag*. ., S. 169-172

Nano/micro-hardness and fracture resistance of Si₃N₄/SiC composites with up to 13 wt.% of SiC nano-particles

Balog, M., Keckes, J., Hofer, F., Galusek, D., Huang, J.-L. & Sajgalik, P., 2007, in: *Journal of the European Ceramic Society*. 27, 5, S. 2145-2153

Neuland in drei Dimensionen

Hofer, F., 2007, in: *TÜV-Times*. 3, S. 11-11

Performance Report 2005/06

Hofer, F. (Herausgeber), 2007, Graz: Verlag der Technischen Universität Graz.

Recent Advances in FIB Specimen Preparation and Nanostructuring

Rogers, M., Kothleitner, G. & Hofer, F., 2007, *Multinational Congress on Electron Microscopy*. ., S. 121-123

Recent Developments in HR-EELS and EFTEM

Kothleitner, G., Schaffer, B., Grogger, W. & Hofer, F., 2007, *Proceedings of 8th Multinational Congress on Microscopy, Prag*. ., S. 37-39

Spectrum-Imaging im analytischen TEM — aktuelle Entwicklungen und Anwendungen

Schaffer, B., Grogger, W., Kothleitner, G. & Hofer, F., 2007, *14.Tagung Festkörperanalytik*. ., S. KV16-KV16

STEM, EDXS and EFTEM Investigations of Sn-Pd and Co-Ni Nanoparticles with Core-Shell Structures

Häussler, D., Liu, F., Jäger, W., Rechberger, W., Hofer, F. & Zhang, X. B., 2007.

Advantages of a monochromated TEM for Solid State Physics

Grogger, W., Kothleitner, G. & Hofer, F., 18 Sept. 2006.

TEM Characterization of Optoelectronic Devices Based on Conjugated Polymers: Can FIB Specimen Preparation Help?

Tchernychova, E., Grogger, W., Sezen, M., Pölt, P., Fisslthaler, E., List, E. & Hofer, F., 3 Sept. 2006.

Thin Layer Electrodes and Improved Percolation Pattern Composites Prepared by Atmospheric Pressure Ion Deposition and Substrate Induced Coagulation

Besenhard, J., Leitner, K., Basch, A., Hosseinmardi, A., Sternad, M., Raimann, P., Korepp, C., Lanzer, E., Nußbaumer, L., Saf, R., Schröttner, H., Hofer, F., Gollas, B. R., Möller, K.-C. & Winter, M., 29 Juni 2006.

Camera characteristics and detection limits on a monochromated TEM

Riegler, K., Kothleitner, G. & Hofer, F., 16 März 2006.

Energy-filtering TEM - New Methods and Applications

Hofer, F., Grogger, W. & Kothleitner, G., 16 Feb. 2006.

Novel coating processes in lithium ion batteries

Besenhard, J., Leitner, K., Han, J.-H., Hosseinmardi, A., Trifonova, A., Hofer, F., Gollas, B. R., Möller, K.-C. & Winter, M., 9 Jan. 2006.

1. Österreichisches Nanoanalytik-Symposium

Glatter, O. (Herausgeber), Santner, U. (Herausgeber) & Hofer, F. (Herausgeber), 2006, Graz: .

A novel coating technique for the preparation of core-shell materials and thin film electrodes

Leitner, K., Besenhard, J., Han, J.-H., Hosseinmardi, A., Trifonova, A., Hofer, F., Gollas, B. R., Möller, K.-C. & Winter, M., 2006, *Proceedings of the International Workshop " Portable and Emergency Energy Sources-From Materials to Systems. .* , S. L9-1-L9-22

Electrically conductive SiC-(Nb,Ti)ss-(Nb,Ti)C_{ss} cermet

Balog, M., Sajgalik, P., Hofer, F., Warbichler, P., Fröhlich, K., Vavra, O., Janega, J. & Huang, J.-L., 2006, in: *Journal of the European Ceramic Society.* 26, S. 1259-1266

Electron Energy-Loss Spectroscopy with a Monochromated TEM

Grogger, W., Kothleitner, G., Schaffer, B. & Hofer, F., 2006, *Microscopy and Microanalysis.* , Band 12, Suppl.. S. 1146-1147 (Microscopy and microanalysis).

Electron-Irradiation Damage in Chromium Nitrides and Chromium Oxynitride Thin Films

Mitterbauer, C., Grogger, W., Wilhartitz, P. & Hofer, F., 2006, in: *Micron.* 37, S. 385-388

Monitoring dynamics of electrode reactions in Li-ion batteries by in situ ESEM

Hochgatterer, N., Raimann, P., Korepp, C., Möller, K.-C., Winter, M., Besenhard, J., Schröttner, H. & Hofer, F., 2006, in: *Ionics.* 12, S. 253-255

Monochromated Scanning Transmission Electron Microscopy

Rechberger, W., Kothleitner, G., Grogger, W. & Hofer, F., 2006.

Multimethodenanalytik von Nanoteilchen und Nanoteilchenverbunden

Leisch, M. (Herausgeber), Hofer, F. (Herausgeber), Aussenegg, F. (Herausgeber) & Keckes, J. (Herausgeber), 2006, Graz: .

Nanoanalytik und Nanostrukturierung optoelektronischer Bauteile auf Basis organischer Halbleiter

Sezen, M., Tchernychova, E., Fisslthaler, E., Pölt, P., Grogger, W., List, E., Chernev, B. S. & Hofer, F., 2006, *Österreichisches Nanoanalytik-Symposium.* , S. 13-13

Optische Streulichtspektroskopie zur Strukturanalyse metallischer Nanopartikel

Ditlbacher, H., Hohenau, A., Aussenegg, F. R., Rogers, M. & Hofer, F., 2006, *Österreichisches Nanoanalytik-Symposium.* , S. 2-2

Superstructure and Domains in La_{0.4}Sr_{0.6}CoO_{3-d}

Gspan, C., Grogger, W., Hofer, F., Bitschnau, B., Bucher, E. & Sitte, W., 2006.

The Effect of Ion / Electron Irradiation on Polymer Based Organic Optoelectronic Devices

Sezen, M., Fisslthaler, E., Pölt, P., Grogger, W., Tchernychova, E., List, E., Chernev, B. S. & Hofer, F., 2006, in: *Microscopy and Microanalysis.* 12, S02, S. 1300-1301

Thin layer electrodes and improved percolation pattern composites, prepared by atmospheric pressure ion deposition and substrate induced coagulation

Besenhard, J., Leitner, K., Basch, A., Hosseinmardi, A., Raimann, P., Korepp, C., Lanzer, E., Nußbaumer, L., Saf, R., Hofer, F., Gollas, B. R., Möller, K.-C. & Winter, M., 2006, *Proceedings of the 7th China International Battery Fair (CIBF2006).* , S. 197-209

Elektronenmikroskopie von Polymeren und funktionellen organischen Bauelementen

Hofer, F. & Ingolic, E., 13 Okt. 2005.

Exploring the resolution limits with a monochromated (S)TEM

Grogger, W., Kothleitner, G., Schaffer, B. & Hofer, F., 25 Sept. 2005.

Methanol Crossover Barrieren in Direkt-Methanol-Brennstoffzellen

Hejze, T., Hofer, F. & Besenhard, J., 19 Sept. 2005.

A Novel coating technique for the preparation of core-shell materials and thin film electrodes

Leitner, K., Besenhard, J., Han, J.-H., Hosseinmardi, A., Trifonova, A., Hofer, F., Gollas, B. R., Möller, K.-C. & Winter, M., 16 Sept. 2005.

TEM, EELS, and EFTEM: Application to Semiconductor Materials and Device Characterization

Grogger, W., Gspan, C., Schaffer, B., Dienstleder, M., Rogers, M., Brunegger, A. & Hofer, F., 15 Sept. 2005.

Structures in the Dermis of a 1000-Year old Mummy from Chiribaya alta, Peru

Pabst, M. A., Letofsky-Papst, I., Bock, E., Spindler, K., Guillen, S. & Hofer, F., 28 Aug. 2005.

New Developments in Energy-filtering Transmission Electron Microscopy

Hofer, F., Schaffer, B. & Kothleitner, G., 1 Aug. 2005.

STEM and EFTEM-Analysis of Nanomaterials at High Spatial and Energy Resolution

Grogger, W., Schaffer, B., Rogers, M., Kothleitner, G. & Hofer, F., 31 Juli 2005.

New developments in energy-filtering transmission electron microscopy

Schaffer, B., Grogger, W., Hofer, F. & Kothleitner, G., 26 Juni 2005.

Novel coating techniques for the preparation of core-shell materials and thin film electrodes

Besenhard, J., Leitner, K., Basch, A., Han, J.-H., Hosseinmardi, A., Raimann, P., Korepp, C., Hamedinger, T. E., Saf, R., Hofer, F., Wagner, J., Gollas, B. R. & Winter, M., 12 Juni 2005.

New Developments In Energy-Filtering Transmission Electron Microscopy

Hofer, F., Grogger, W. & Kothleitner, G., 5 Juni 2005.

Development of advanced EFTEM/STEM methods and first applications

Schaffer, B., Grogger, W., Kothleitner, G. & Hofer, F., 10 Feb. 2005.

0.60eV Energy Resolution in EELS Using a Depleted Thermionic LaB₆-Cathode

Mitterbauer, C., Grogger, W., Kothleitner, G., Spehr, R., Tiemeijer, P. & Hofer, F., 2005, in: *Microscopy and Microanalysis*. 11, 2, S. 712-713

Advances in Electron Microscopy of Polymers and Organic Functional Materials

Hofer, F., Ingolic, E. & Pölt, P., 2005, *7th Austrian Polymer Meeting*. ., S. 44-44

Advances in the segmentation of multicomponent microanalytical images

Cutrona, J., Bonnet, N., Herbin, M. & Hofer, F., 2005, in: *Ultramicroscopy*. 103, 2, S. 141-152

Advantages of a monochromator for bandgap measurements using electron energy-loss spectroscopy

Kimoto, K., Kothleitner, G., Grogger, W., Matsui, Y. & Hofer, F., 2005, in: *Micron*. 36, S. 185-189

Advantages of a monochromator for bandgap measurements using electron-loss spectroscopy

Kimoto, K., Kothleitner, G., Grogger, W., Matsui, Y. & Hofer, F., 2005, in: *Micron*. 36, 2, S. 185-189

Application of Electron Energy Loss Spectroscopy and Energy Filtering Transmission Electron Microscopy for Microchemical Studies in 2.25Cr-1Mo Steel

Parameswaran, P., Letofsky-Papst, I., Hofer, F., Grogger, W. & Raghunathan, V. S., 2005, in: *Journal of Materials Science & Technology*. 21, 3, S. 361-366

Außerstromlos abgeschiedene Palladiumschichten als Methanolbarrieren

Hejze, T., Gollas, B. R., Zankel, A., Hofer, F. & Besenhard, J., 2005, *Grundlagen und Anwendungen der Elektrochemischen Oberflächentechnik*. 1 Aufl. Frankfurt: Gesellschaft Deutscher Chemiker, Band 32. S. 266-266 (GDCH-Monographien).

Bacterial Spores in the skin of a 1000-Year-old Peruvian Mummy

Pabst, M. A., Letofsky-Papst, I., Bock, E., Spindler, K., Guillen, S. & Hofer, F., 2005.

Bacterial Spores in the Skin of a 1000 Year old peruvian mummy

Pabst, M. A., Letofsky-Papst, I., Bock, E., Spindler, K., Guillen, S. & Hofer, F., 2005, *Microscopy Conference - Dreiländertagung*. ., S. 3-3

Development of advanced EFTEM/STEM methods and first applications

Schaffer, B., Grogger, W., Kothleitner, G. & Hofer, F., 2005, *SFB Seminar*. ., S. 3-3

EDGE - International EELS Workshop 2005

Muller, D. (Herausgeber), Hofer, F. (Herausgeber), Grogger, W. (Herausgeber) & Kothleitner, G. (Herausgeber), 2005, Graz: .

EFTEM und EELS investigations at high spatial and high energy resolution

Hofer, F., 2005, *TEM meeting*. ., S. 3-3

Elektronenmikroskopie an den Grenzen örtlicher und energetischer Auflösung

Hofer, F., 2005, *Österreichische Chemietage*. ., S. 30-30

Energy-Filtering TEM in Semiconductor Research

Hofer, F., Grogger, W. & Schaffer, B., 2005, *Microscopy Conference - Dreiländertagung.* ., S. 1-1

Energy-filtering transmission electron microscopy on the nanometer length scale

Grogger, W., Varela, M., Ristau, R., Schaffer, B., Hofer, F. & Krishnan, K., 2005, in: *Journal of Electron Spectroscopy and Related Phenomena.* 143, 1-2, S. 139-147

Energy Resolution and Spatial Resolution on a monochromated(S)TEM

Rechberger, W., Kothleitner, G. & Hofer, F., 2005, *Microscopy Conference - Dreiländertagung.* ., S. 8-8

Exploring the resolution limits with a monochromator

Grogger, W., Kothleitner, G., Schaffer, B. & Hofer, F., 2005, *Conference on Frontiers of Electron Microscopy in Materials Science.* ., S. 5-5

Gold nanoparticles - syntesis, characterization and influence of varios additives on their size and shape

Riegler, K., Rogers, M., Schaffer, B., Kothleitner, G. & Hofer, F., 2005, *Microscopy Conference - Dreiländertagung.* ., S. 10-10

Gold nanoparticles - synthesis, characterization and influence of various additives on their size and shape

Riegler, K., Rogers, M., Schaffer, B., Kothleitner, G. & Hofer, F., 2005.

Gold nanoparticles - Synthesis, Characterization and Influence of varoius additives on their Size+Shape

Riegler, K., Rogers, M., Schaffer, B., Kothleitner, G. & Hofer, F., 2005.

Morphology Determination of Functional Poly[2-methoxy-5-(3,7-dimethyloctyloxy)-1,4-phenylenevinylene]/Poly[oxa-1,4-phenylene-1,2-(1-cyanovinylene)-2-methoxy,5-(3,7-dimethyloctyloxy)-1,4-phenylene-1,2-(2-cyanovinylene)-1,4-phenylene] Blends as Used for All-Polymer Solar Cells

Loos, J., Yang, X., Koetse, M., Sweelssen, J., Schoo, H., Veenstra, S. C., Kothleitner, G. & Hofer, F., 2005, in: *Journal of Applied Polymer Science.* 97, 3, S. 1001-1007

New developments in Energy-filtering Transmission Electron Microscopy

Hofer, F., Schaffer, B., Grogger, W. & Kothleitner, G., 2005, *Microscopy Microanalysis* 11. ., S. 48-49 (Suppl2).

New Developments in Energy-Filtering Transmission Electron Microscopy

Schaffer, B., Grogger, W., Hofer, F. & Kothleitner, G., 2005, *7th Multinational Congress on Microscopy.* ., S. 51-54

New Developments In Energy-Filtering Transmission Electron Microscopy

Hofer, F., Grogger, W. & Kothleitner, G., 2005, *XII International Conference on Electron Microscopy of Solids EM'2005.* ., S. 33-33

Optimization of the FIB milling conditions for RTP-processed Niobium and Tantalumnitride thin films on silicon substrates

Dienstleder, M., Rogers, M., Kothleitner, G., Hofer, F. & Kolbesen, B., 2005.

Optimization of the FIB milling conditions for RTP-processed Niobium and Tantalumnitride thin films on silicon substrates

Dienstleder, M., Rogers, M., Kothleitner, G., Hofer, F. & Kolbesen, B. O., 2005, *Microscopy Conference - Dreiländertagung.* ., S. 4-4

Performance Report 2003/2004

Hofer, F. (Herausgeber), 2005, Graz: . (Performance Report of the Research institute for Electron Microscopy)

Preparation of Pd-coated polymer electrolyte membranes and their application in direct methanol fuel cells

Hejze, T., Gollas, B. R., Sauerbrey, R., Schmied, M., Hofer, F. & Besenhard, J., 2005, in: *Journal of Power Sources.* 140, 1, S. 21-27

Preservation of the Dermis of a 1000-Year old mummy from Chiribaya Alta, Peru

Pabst, M. A., Letofsky-Papst, I., Wilhelm, P., Bock, E., Spindler, K., Guillen, S. & Hofer, F., 2005, *Microscopy Conference - Dreiländertagung.* , S. 2-2

Preservation of the Dermis of a 1000Year old Mummy from Chiribaya Alta,Peru

Pabst, M. A., Letofsky-Papst, I., Wilhelm, P., Bock, E., Spindler, K., Guillen, S. & Hofer, F., 2005.

Silver Nanowires as surface plasmon Resonators

Ditlbacher, H., Hohenau, A., Kreibitz, U., Rogers, M., Hofer, F., Aussenegg, F., Krenn, J. & Wagner, D., 2005, in: *Physical Review Letters.* 95, S. 257-403

STEM-and EFTEM-Analysis of Nanomaterials at High Spatial and High Energy Resolution

Grogger, W., Schaffer, B., Rogers, M., Kothleitner, G. & Hofer, F., 2005, *Microscopy & Microanalysis.* , Band Suppl2. S. 1436-1437

Superstructure and Domains in La_{0.4}Sr_{0.6}CoO_{2.71}

Gspan, C., Grogger, W., Hofer, F., Bucher, E. & Sitte, W., 2005.

Superstructure and Domains in La_{0.4}Sr_{0.6}CoO_{2.71}

Gspan, C., Grogger, W., Letofsky-Papst, I., Hofer, F., Bucher, E. & Sitte, W., 2005, *Microscopy Conference - Dreiländertagung.* , S. 7

TEM, EELS and EFTEM: Application to Semiconductor Materials and Device Characterization

Grogger, W., Schaffer, B. & Hofer, F., 2005, *Crystalline Defects and Contamination: DECON 2005.* Pennington, USA: The Electrochemical Society, Band 4. S. 106-112 (Their Impact and Control in Device Manufacturing IV).

Seeing the Invisible / Neues aus der Mikro- und Nanowelt

Hofer, F. & Kothleitner, G., 25 Nov. 2004.

Außenstromlos abgeschiedene Palladiumschichten als Methanolbarrieren

Hejze, T., Gollas, B. R., Zankel, A., Hofer, F. & Besenhard, J., 8 Sept. 2004.

Improvement of the cycling performance of the LiCoO₂ positive active material rechargeable lithium ion batteries at cycling conditions beyond 4.2V coating with nano-dispersed metal oxides and carbon powders using the substrate-induced coagulation (SIC) coating process

Han, J.-H., Wachtler, M., Möller, K.-C., Besenhard, J., Park, S.-Y., Park, H.-Y., Lee, K.-Y., Wagner, J., Papst, I., Hofer, F. & Winter, M., 27 Juni 2004.

Applications of the SIC coating process in electrochemical processes and power sources

Besenhard, J., Han, J.-H., Wachtler, M., Möller, K.-C., Wagner, M. R., Papst, I., Hofer, F., Park, H.-Y., Park, S.-Y., Lee, K.-Y. & Winter, M., 23 Juni 2004.

Electron microscopical characterization of complex oxides and composites

Hofer, F., Schaffer, B. & Gspan, C., 25 März 2004.

Experiences with a 200kV monochromated (S)TEM

Kothleitner, G., Hofer, F. & Rogers, M., 28 Jan. 2004.

Applications of Energy-Filtering TEM in Materials Science

Grogger, W., Hofer, F. & Kothleitner, G., 2004, in: *GIT Laboratory Journal Europe.* 48, S. 17-19

Außenstromlos abgeschiedene Palladiumschichten als Methanolbarrieren

Hejze, T., Gollas, B. R., Zankel, A., Hofer, F. & Besenhard, J., 2004.

Außenstromlos abgeschiedene Palladiumschichten als Methanolbarrieren

Hejze, T., Gollas, B. R., Zankel, A., Hofer, F. & Besenhard, J., 2004, *GDCh Fachgruppentagung "Angewandte Elektrochemie"*. ., S. 65-65

Battery graphites meeting the requirements of PC and γ -BL electrolytes

Kohs, W., Schröttner, H., Barsukov, I., Doninger, J., Hofer, F., Besenhard, J. & Winter, M., 2004, *5th Advanced Batteries and Accumulators (ABA)*. ., S. 1-1

Boron doped battery graphites and their abilities in aggressive PC and γ -BL rich electrolytes

Kohs, W., Schröttner, H., Barsukov, I., Doninger, J., Hofer, F., Besenhard, J. & Winter, M., 2004, *55th Annual Meeting of the ISE*. ., S. 1-1

Characterization and compensation of environmental magnetic fields for a monochromatized TEM

Grogger, W., Kothleitner, G., Kraus, B. & Hofer, F., 2004, *Proceedings EMC / Vol. 1, Instrumentation & Methodology*. ., S. 271-272

Cross-section analysis of organic light-emitting diodes

Schaffer, B., Mitterbauer, C., Schertl, A., Pogantsch, A., Rentenberger, S., Zojer, E. & Hofer, F., 2004, in: *Ultramicroscopy*. 101, S. 123-123

Das neue Nanotechnologie-Labor der TU Graz

Hofer, F., 2004, in: *TÜV-Times*. S. 10-11

EFTEM elemental mapping in materials science

Hofer, F. & Warbichler, P., 2004, *Transmission Electron Energy Loss Spectrometry in Materials Science and the EELS Atlas*. Berlin: Wiley-VCH, S. 181-233

EFTEM investigation of TiO₂ and Al₂O₃ coated Lithium-Cobalt Oxides

Schaffer, B., Basch, A., Han, J.-H., Hofer, F. & Besenhard, J., 2004, *SFB-Seminar*. ., S. 1-1

Electron energy loss-near edge structure as a fingerprint for identifying chromium nitrides

Mitterbauer, C., Hebert, C., Kothleitner, G., Hofer, F., Schattschneider, P. & Zandbergen, H. W., 2004, in: *Solid State Communications*. 130, S. 209-213

Electron energy-loss spectrometry at high energy resolution for materials research

Hofer, F., Kothleitner, G. & Grogger, W., 2004, *13th European Microscopy Congress*. ., S. 725-726 (Proceedings Vol.2).

Electron energy-loss spectrometry at the frontier of spatial and energy resolution

Hofer, F., Grogger, W. & Kothleitner, G., 2004, *IFES 04, 49th International Field Emission Symposium*. ., S. 24-24

Electron energy-loss spectrometry in the electron microscope

Grogger, W., Hofer, F. & Kothleitner, G., 2004, *Proceedings of the 6th Regional Workshop EMAS 2004*. ., S. 69-70

Elektronensondenmethoden - Nanoanalytik im Elektronenmikroskop

Hofer, F. & Grogger, W., 2004, *Analytika*. ., S. 1-1

Energy Filtering Transmission Electron Microscopy by the Example of a Cr steel

Letofsky-Papst, I., Warbichler, P., Hofer, F., Letofsky, E. & Jochum, C., 2004, in: *Praktische Metallographie/Practical Metallography*. 41, 7, S. 334-343

Energy-filtering transmission electron microscopy (EFTEM)

Grogger, W., Hofer, F. & Kothleitner, G., 2004, *Proceedings of the 6th Regional Workshop EMAS 2004.* , S. 71-72

Experiences with a 200 kV monochromated (S)TEM

Kothleitner, G., Rogers, M. & Hofer, F., 2004, *Microscopy by the Bay.* , S. P98-P98

Fortschritte bei der Unterdrückung von Methanol-Crossover in Direkt-Methanol-Brennstoffzellen

Hejze, T., Sauerbrey, R., Gollas, B. R., Schmied, M., Hofer, F. & Besenhard, J., 2004, *Elektrochemie und Materialforschung.* 1 Aufl. Frankfurt: GDCh, Band 29. S. 194-194 (GDCh-Monographie).

Imaging of ultrathin silicon dioxide layers in semiconducting devices by means of energy-filtered transmission electron microscopy

Schaffer, B., Grogger, W. & Hofer, F., 2004, in: Institute of Physics Conference Series. 180, S. 405-408

Improved cycling behaviour beyond 4.2 V of coated LiCoO₂ prepared by the substrate induced coagulation coating process with nano-sized metal oxide and carbon powders

Han, J.-H., Kim, M.-J., Park, S.-Y., Bae, J.-S., Lee, K.-Y., Wachtler, M., Wagner, M. R., Papst, I., Hofer, F., Möller, K.-C., Besenhard, J. & Winter, M., 2004.

Influence of the reductive preparation conditions on the morphology and on the electrochemical performance of Sn/SnSb

Trifonova, A., Wagner, M. R., Wachtler, M., Schröttner, H., Mitterbauer, C., Hofer, F., Möller, K.-C., Winter, M. & Besenhard, J., 2004, in: Solid State Ionics. 168, 1-2, S. 51-59

Materials characterisation of Pd/Nafion® composites obtained by electroless painting

Hejze, T., Sauerbrey, R., Gollas, B. R., Zankel, A., Gspan, C., Hofer, F. & Besenhard, J., 2004, *5th Advanced Batteries and Accumulators (ABA).* , S. 2-2

Microstructural characterization of Ti-TiN/CNx gradient-multilayered coatings

Fernandez-Ramos, C., Sanchez-Lopez, J. C., Justo, A., Rojas, T. C., Letofsky-Papst, I., Hofer, F. & Fernandez, A., 2004, in: Surface and Coatings Technology. 180-181, S. 526-532

Mikro- und Nanoanalytik von Festkörpern

Hofer, F., 2004, in: ChemieReport.at. 1, S. 32-33

On the occurrence of Z-phase in a creep-tested 10% Cr steel

Letofsky-Papst, I., Warbichler, P., Hofer, F., Letofsky, E. & Cerjak, H.-H., 2004, in: Zeitschrift für Metallkunde. 95, 1, S. 18-21

Processing of nanostructures with a DualBeam FIB/SEM

Rogers, M., Schaffer, B., Kothleitner, G. & Hofer, F., 2004, *Microscience2004.* , S. 31-32

Rat für Forschung und Technologieentwicklung (RFT)-Projekte: Neue Untersuchungsmethoden für Mikrosystemtechnik und Nanotechnologie

Hofer, F., 2004, in: Forschungsjournal der Technischen Universität Graz. 03/04, S. 14-15

Recent progress in methanol crossover reduction using palladium coated nafion

Hejze, T., Koscher, G., Gollas, B. R., Hofer, F., Kordesch, K. & Besenhard, J., 2004, *5th Advanced Batteries and Accumulators (A.B.A.).* , S. 70-70

STEM performance on a monochromated TEM

Rechberger, W., Kothleitner, G., Grogger, W. & Hofer, F., 2004, *EMC 2004.* , S. 257-258 (Proceedings Vol.1).

Superstructure and Domains in La_{0.4}Sr_{0.6}CoO₃

Gspan, C., Grogger, W., Mitterbauer, C., Hofer, F., Bucher, E. & Sitte, W., 2004.

Synthesis, size control and electron microscopic characterization of lamellar gold nanoparticles

Rogers, M., Schaffer, B. & Hofer, F., 2004, *13th European Microscopy Congress.* , S. 109-110 (Proceedings Vol.2).

The formation of molecular nitrogen in chromium nitrides monitored by EELS

Mitterbauer, C., Grogger, W., Wilhartitz, P. & Hofer, F., 2004, *13th European Microscopy Congress.* , S. 285-286

Application of the SIC coating process in Li ion batteries, example: LiCoO₂

Han, J.-H., Wachtler, M., Möller, K.-C., Besenhard, J., Wagner, M. R., Papst, I. & Hofer, F., 4 Dez. 2003.

Energy-filtering transmission electron microscopy for characterizing organic light emitting devices

Hofer, F., Grogger, W. & Schaffer, B., 16 Nov. 2003.

Synthesis and electron microscopical characterization of noble metal nanoparticles

Hofer, F. & Rogers, M., 20 Okt. 2003.

Experiences and possibilities with a 200 kV monochromated (S)TEM

Kothleitner, G., Grogger, W. & Hofer, F., 4 Sept. 2003, in: *Microscopy and Microanalysis.* 9, SUPPL. 2, S. 846-847 2 S.

Microstructural aspects of the ionic transport properties of strontium-substituted lanthanum cobaltites

Sitte, W., Bucher, E., Preis, W., Papst, I., Grogger, W. & Hofer, F., 25 Juli 2003, in: *Materials Research Society Symposium Proceedings.* 756, S. 527-532 6 S.

Analytical Electron Microscopy in Materials and Biological Sciences

Hofer, F., Grogger, W., Kothleitner, G. & Warbichler, P., 2003, in: *Microscopy and Microanalysis.* 9, Suppl. 3, S. 12-13

Application of the SIC Coating Process in Supercapacitors and Batteries. Part I: Coating of Lithium Ion Battery Electrodes by the SIC Coating Process, Example: LiCoO₂

Wagner, J., Han, J.-H., Wachtler, M., Möller, K.-C., Besenhard, J., Letofsky-Papst, I., Hofer, F., Winter, M., Park, S.-Y., Park, K.-Y. & Lee, K.-Y., 2003, *Proceedings of the International Symposium on Power Sources for Stationary and Distributed Power Systems, München.* , S. 1-1

Application of the SIC Coating Process in Supercapacitors and Batteries. Part II: Coating of Lithium Ion Battery Electrodes by the SIC Coating Process, Example: LiCoO₂

Letofsky-Papst, I., Han, J.-H., Möller, K.-C., Besenhard, J., Wagner, J., Hofer, F., Winter, M., Lee, K.-Y., Han, J.-H. & Wachtl, M., 2003, *Proceedings of the International Symposium on Power Sources for Stationary and Distributed Power Systems.* , S. 1-1

Applications of Energy-Filtering TEM in Materials Science

Grogger, W., Hofer, F. & Kothleitner, G., 2003, in: *GIT Imaging & Microscopy.* 4, S. 52-54

A Study on Electrolyte Interactions with Graphite Anodes Exhibiting Structures with Various Amounts of Rhombohedral Phase

Hofer, F., Schröttner, H., Kohs, W., Santner, H., Albering, J., Möller, K.-C., Besenhard, J., Winter, M., Doninger, J. & Barsukov, I., 2003, in: *Journal of Power Sources.* 119-121, S. 528-538

Comparative electron energy-loss near-edge fine structure investigations of titanium oxides

Mitterbauer, C., Kothleitner, G. & Hofer, F., 2003, in: *Microscopy and Microanalysis.* 9, Suppl. 2, S. 834-835

EELS of STEELS and Alloys

Craven, A. (Herausgeber), Hofer, F. (Herausgeber) & Mayer, J. (Herausgeber), 2003, Graz: .

EELS Performance Measurements on a New High Energy Resolution Imaging Filter

Kothleitner, G. & Hofer, F., 2003, in: *Micron*. 34, S. 211-218

Effects of Sample Preparation on Cr-Steels: An EFTEM Study

Rechberger, W., Warbichler, P., Sonderegger, B., Rajek, J., Kothleitner, G. & Hofer, F., 2003, *Workshop EELS of Steels and Alloys, Bruck an der Mur, Austria, Book of Abstracts, p. 14. .*, S. 14-14

Effects of Sample Preparation on Cr-Steels:An EFTEM Study

Rechberger, W., Warbichler, P., Kothleitner, G. & Hofer, F., 2003, in: *Microscopy and Microanalysis*. Vol.9, S. 90-91

EFTEM and EELS at the Frontiers of Spatial and Energy Resolution: What does "Resolution" mean in Practice?

Grogger, W., Schaffer, B., Kothleitner, G., Mitterbauer, C. & Hofer, F., 2003, *12. Tagung Festkörperanalytik, Wien, Kurzfassungen, . .*, S. KV8-KV8

EFTEM and EELS at the Frontiers of Spatial and Energy Resolution: What does "Resolution" mean in Practice?

Grogger, W., Schaffer, B., Kothleitner, G., Mitterbauer, C. & Hofer, F., 2003, in: *Microscopy and Microanalysis*. 9(suppl.3), S. 72-73

EFTEM Investigation on a Ferritic ODS Alloy: From Spectra to Chemical Phase Maps

Grogger, W., Warbichler, P., Ortner, H. M. & Hofer, F., 2003, *Workshop EELS of Steels and Alloys, Bruck an der Mur, Austria, Book of Abstracts, p. 16. .*, S. 16-16

EFTEM Jump-ratio Imaging for the Detection of Precipitates in Steels an Alloys

Hofer, F. & Warbichler, P., 2003, *Workshop EELS of Steels and Alloys, Bruck an der Mur, Austria, Book of Abstracts, p. 17. .*, S. 17-17

Electron Energy-Loss Near Edge Structures of 3d Transition Metal Oxides Recorded at High Energy Resolution

Mitterbauer, C., Kothleitner, G., Grogger, W., Hofer, F., Zandbergen, H. W., Freitag, B. & Tiemeijer, P., 2003, in: *Ultramicroscopy*. 96, 3-4, S. 469-480

Elemental Occurrence Maps and MLS-fitting to EELS Spectrum Images: Novel Approaches for the Compositional Analysis of Steels and Alloys

Kothleitner, G. & Hofer, F., 2003, *Workshop EELS of Steels and Alloys, Bruck an der Mur, Austria, Book of Abstracts, p. 13. .*, S. 13-13

Elemental occurrence maps: a starting point for quantitative EELS spectrum image processing

Kothleitner, G. & Hofer, F., 2003, in: *Ultramicroscopy*. 96, S. 491-508

ELNES as a Fingerprint for Identifying Transition-metal oxides

Mitterbauer, C., Hebert, C., Kothleitner, G., Hofer, F. & Schattschneider, P., 2003, *Workshop EELS of Steels and Alloys, Bruck an der Mur, AustriaBook of Abstracts, p. 8. .*, S. P.8-P.8

Energiefilternde Elektronenmikroskopie am Beispiel eines Cr-Stahles

Letofsky-Papst, I., Warbichler, P., Hofer, F. & Jochum, C., 2003, in: *Praktische Metallographie/Practical Metallography*. 34, S. 229-234

Energy-filtering TEM at high magnification: spatial resolution and detection limits

Grogger, W., Schaffer, B., Hofer, F. & Krishnan, K. M., 2003, in: *Ultramicroscopy*. 96, S. 481-489

Energy-filtering TEM at the frontier of spatial and energy resolution

Grogger, W., Hofer, F. & Kothleitner, G., 2003, *EUROMAT 2003, Lausanne. .*, S. 1-1

Energy-filtering TEM at the frontier of spatial and energy resolution

Hofer, F., Grogger, W., Kothleitner, G. & Warbichler, P., 2003, *ANAKON 2003 der GDCh, Konstanz, Kurzreferate S. 27.* , S. 27-27

Energy-filtering TEM at the frontier of spatial and energy resolution

Hofer, F., Grogger, W., Kothleitner, G., Mitterbauer, C. & Schaffer, B., 2003, "*Advanced Materials 2003*", *Proc. 10th Int. Symp. Adv. Mater. (ISAM 2003)*, eds. Y. Bando et al., Tsukuba, Japan, pp. 41-42. , S. 41-42

Energy-filtering Transmission Electron Microscopy for Characterising Organic Light Emitting Devices

Schaffer, B., Pogantsch, A. & Hofer, F., 2003, *Int. Symp. on Nanotechnology and LEDs, Loipersdorf.* , S. 1-1

Experiences and Possibilities with a 200 kV Monochromated (S)TEM

Kothleitner, G. & Hofer, F., 2003, in: *Microscopy and Microanalysis*. 9, Suppl. 3, S. 80-81

Experiences and Possibilities with a 200 kV Monochromated (S)TEM

Kothleitner, G., Grogger, W. & Hofer, F., 2003, in: *Microscopy and Microanalysis*. 9, Suppl. 2, S. 846-847

First Applications of Electron Energy-Loss Spectroscopy with High Energy Resolution

Kothleitner, G., Mitterbauer, C., Grogger, W., Hofer, F., Zandbergen, H., Tiemeijer, P., Freitag, B. & Barfels, M., 2003, (Eingereicht) *Mat. Res. Soc. Symp. Proc. Vol. 738.* .

High energy resolution EELS using a monochromized 200 kV TEM: Comparative investigation of titanium oxides

Mitterbauer, C., Kothleitner, G., Hofer, F., Tiemeijer, P., Freitag, B. & Zandenbergen, H. W., 2003, in: *Microscopy and Microanalysis*. 9, Suppl. 3, S. 86-87

High Energy Resolution EELS with a Monochromated (S)TEM

Hofer, F., Grogger, W., Kothleitner, G. & Mitterbauer, C., 2003, *6. Multinat. Congr. Microsc. - Europe. Extens.* , S. 175-176

High Resolution EELS using monochromator and high performance spectrometer: comparison of V2O5 ELNES with NEXAFS and band structure calculations

Kothleitner, G., Su, D., Zandbergen, H. W., Tiemeijer, P., Hävecker, M., Hebert, C., Knop-Gericke, A., Freitag, B., Hofer, F. & Schlögl, R., 2003, in: *Micron*. 34, S. 235-238

HREM Study of Hexagonal and Rhombohedral Graphites for use as Anodes in Lithium Ion Batteries

Schaffer, B., Kohs, W., Möller, K.-C., Winter, M., Schröttner, H., Hofer, F. & Besenhard, J., 2003, in: *Microscopy and Microanalysis*. 9(Suppl.3), S. 54-55

Imaging of ultrathin silicon oxide layers in semiconducting devices by means of energy filtering transmission electron microscopy (EFTEM)

Schaffer, B., Grogger, W. & Hofer, F., 2003, *13th Int. Conf. on Microscopy of Semiconducting Materials (MSM13)*, Cambridge. , S. MSM13-MSM13

In situ characterization of SEI formation on graphite in the presence of vinylene group containing film forming electrolyte additives

Möller, K.-C., Santner, H., Kern, W., Yamaguchi, S., Besenhard, J., Hofer, F. & Winter, M., 2003, in: *Journal of Power Sources*. 119-121, S. 561-566

Performance Report 2001 / 2002

Hofer, F. (Herausgeber), 2003, Graz: . (Performance reports of the Research Institute for Electron Microscopy)

Performance Tests and Possibilities with a New 200 kV Monochromated (S)TEM

Kothleitner, G., Grogger, W. & Hofer, F., 2003, *12. Tagung Festkörperanalytik, Wien, Kurzfassungen.* , S. KV7-KV7

Silica-Titania Mesostructured Films

Hüsing, N., Hofer, F., Launay, B. & Kickelbick, G., 2003, in: *Journal of Sol-Gel Science and Technology*. 26, S. 615-619

Structural and Compositional Analysis of Chromium Oxynitride Hard Coatings

Grogger, W., Hofer, F., Warbichler, P. & Wilhartitz, P., 2003, *12. Tagung Festkörperanalytik, Wien, Kurzfassungen*, . ., S. KV41-KV41

Synthesis and Characterization of Noble Metal Nanoparticles of Various Shapes

Rogers, M., Schaffer, B., Grogger, W., Zankel, A. & Hofer, F., 2003.

TEM Investigations of Cross-Sectional Prepared Organic Light Emitting Devices

Schaffer, B., Pogantsch, A., Rentenberger, S., Zojer, E., Hofer, F., Mitterbauer, C. & Schertel, A., 2003, in: *Microscopy and Microanalysis*. 9(Suppl.3), S. 266-267

The influence of graphite sub-surface structures on the electrochemical performance in lithium ion batteries

Kohs, W., Möller, K.-C., Besenhard, J., Barsukov, I. & Hofer, F., 2003, (Eingereicht) *PV-2003-20, New trends in intercalation compounds for energy storage and conversion*. Pennington: The Electrochemical Society Inc.

The influence of sub-surface structures of graphite on the anode performance in lithium ion batteries

Kohs, W., Hofer, F., Barsukov, I., Doninger, J., Olivier, J. P., Besenhard, J. & Winter, M., 2003, *International Conference Advanced Batteries and Accumulators*. ., S. 15-16

The Skin of a 1000-Year-Old Peruvian Mummy

Wilhelm, P., Letofsky-Papst, I., Simic, S., Hofer, F., Pabst, M. A., Bock, E. & Spindler, K., 2003, *ICXOM, Chamonix, France*. ., S. 1-1

Vanadium Nitride Films Formed by Rapid Thermal Processing (RTP): Depth Profiles and Interface Reactions Studied by Complementary Analytical Techniques

Berendes, A., Galesic, I., Mertens, R., Warbichler, P., Hofer, F., Kolbesen, B. O., Bock, W., Oechsner, H., Theodossiu, E. & Baumann, H., 2003, in: *Zeitschrift für Anorganische und Allgemeine Chemie*. 629, S. 1769-1777

Width determination of SiO₂ films in Si-based devices using low-loss EFTEM: image contrast as a function of sample thickness

Schaffer, B., Grogger, W. & Hofer, F., 2003, in: *Micron*. 34, S. 1-7

Microstructure and ionic conductivity of strontium-substituted lanthanum cobaltites

Bucher, E., Sitte, W., Rom, I., Papst, I., Grogger, W. & Hofer, F., 1 Dez. 2002, in: *Solid State Ionics*. 152-153, S. 417-421
5 S.

Neue elektronenmikroskopische Untersuchungsverfahren für die Papiertechnologie

Pölt, P. & Hofer, F., 25 Nov. 2002.

AEM investigation of strontium substituted La-Co-Perovskites

Letofsky-Papst, I., Grogger, W., Rom, I., Hofer, F., Bucher, E. & Sitte, W., 20 Nov. 2002, in: *Microscopy and Microanalysis*. 8, SUPPL. 2, S. 618-619 2 S.

EFTEM at high magnification: Principles and practical applications

Grogger, W., Krishnan, K. M. & Hofer, F., 20 Nov. 2002, in: *Microscopy and Microanalysis*. 8, SUPPL. 2, S. 72-73 2 S.

Micro-characterisation of precipitates in 9-12% Cr-steels using EELS and EFTEM

Letofsky-Papst, I., Hofer, F., Warbichler, P., Letofsky, E. & Cerjak, H.-H., 30 Sept. 2002.

Improvements in characterisation of interfaces in solid-state devices

Schaffer, B., Mitterbauer, C., Hofer, F. & Zojer, E., 2002, *SFB-Seminar*. , S. 1-1

Low Cost SiC/Si₃N₄ Nanocomposites

Hnatko, M., Sajgalik, P., Lences, Z., Monteverde, F., Dusza, J., Warbichler, P. & Hofer, F., 2002, in: *Key Engineering Materials*. S. 206-213

Methanol crossover suppression in direct methanol fuel cells by sub-micron palladium layers

Hejze, T., Hofer, F., Schmied, M. & Besenhard, J., 2002, *3th Advanced Batteries and Accumulators (A.B.A.)*. , S. 15-1

Micro-characterisation of precipitates in 9-12% Cr-steels using EELS and EFTEM

Letofsky-Papst, I., Hofer, F., Warbichler, P., Letofsky, E. & Cerjak, H.-H., 2002, *Materials Week 2002, ICM-International Congress Centre Munich*. , S. 0-0

Precipitation of NbC in a model austenitic steel

Rainforth, W. M., Black, M. P., Higginson, R. L., Palmiere, E. J., Sellars, C. M., Letofsky-Papst, I., Warbichler, P. & Hofer, F., 2002, in: *Acta Materialia*. 50, S. 735-747

Visualization of Compositional Fluctuations in Complex Oxides Using Energy-Filtering Transmission Electron Microscopy

Rom, I., Hofer, F., Bucher, E., Sitte, W., Gatterer, K., Fritzer, H. P. & Popitsch, A., 2002, in: *Chemistry of Materials*. 14, 1, S. 135-143

Processing of Nanostructured Polymer Microspheres by an Ion Beam Technique

Goriup, M., Hayn, G., Steindl, T., Stefan, M., Hofer, F. & Saf, R., 5 Aug. 2001.

Thin-film zinc/manganese dioxide electrodes

Barbic, P., Binder, L., Voß, S., Hofer, F. & Grogger, W., 10 Mai 2001, in: *Monatshefte für Chemie - Chemical Monthly*. 132, 4, S. 465-472 8 S.

Polymer-Based Micro- and Nanostructures prepared by an Ion-Beam technique

Goriup, M., Hayn, G., Reichmann, K., Hofer, F. & Saf, R., 4 Jan. 2001.

Interfacial pattern formation in the Pt-Ni-O system studied by Energy-Filtering Transmission Electron Microscopy

Schröder, A., Sitte, W., Rom, I., Grogger, W. & Hofer, F., 1 Jan. 2001, in: *Defect and Diffusion Forum*. 194-199 PART 2, S. 1563-1568 6 S.

Compositional mapping with energy filtering TEM: The present status

Hofer, F., Kothleitner, G. & Warbichler, P., 2001, *Australian Conference on Microscopy & Microanalysis*. , S. 1136-1137

Difference spectrum images: Numerical filters applied to EELS 3D data sets

Kothleitner, G., Hofer, F. & Trevor, C., 2001, *Australian Conference on Microscopy & Microanalysis*. , S. 1160-1161

Electron energy loss near edge structure on the nitrogen K-edge in vanadium nitrides

Hofer, F., Warbichler, P., Scott, A., Brydson, R., Galesic, I. & Kolbesen, B., 2001, in: *Journal of Microscopy*. 204, S. 166-171

Erhöhung der Aussagekraft nanoanalytischer Methoden bei der Untersuchung innerer Grenzflächen von Werkstoffen

Hofer, F., 2001, .

Formation of interfacial nano-layers in the system Pt-Ni-O

Schröder, A., Sitte, W., Rom, I., Kothleitner, G. & Hofer, F., 2001, in: *Solid State Ionics*. 141-142, S. 177-183

Low Cost SiC/Si₃N₄ Nanocomposites

Hnatko, M., Sajgalik, P., Lences, Z., Monteverde, F., Dusza, J., Warbichler, P. & Hofer, F., 2001.

Mapping the Distribution of Doping Elements in Electrolytically Doped Manganese Dioxide by EFTEM and EELS

Letofsky-Papst, I., Kothleitner, G., Hofer, F. & Binder, L., 2001, *Electroactive Materials*. Besenhard, J. O., Sitte, W., Stelzer, F. & Gamsjäger, H. (Hrsg.). Wien: Springer Wien, S. 121-129 (Electroactive Materials).

Patterned Modification of Polymer Surfaces employing UV sensitive Gases

Feiertag, P., Kavc, T., Meyer, U., Gsoels, I., Kern, W., Hofer, F. & Rom, I., 2001, in: *Synthetic Metals*. 121, S. 1371-1372

Performance Report 1999 / 2000

Hofer, F. (Herausgeber), 2001, Graz: . (Performance Reports of the Research Institute for Electron Microscopy)

Polymer Processing by an Ion-beam technique: From Microparticles to multilayered Thin-film Systems

Goriup, M., Steindl, T., Hayn, G., Reichmann, K., Hofer, F., Zojer, E., Scherf, U., Stelzer, F. & Saf, R., 2001, *Smarton 5 Workshop*. Maastricht: ., S. 38-38

Seit 50 Jahren Partner der Industrie- das Zentrum der Elektronenmikroskopie

Golob, P., Hofer, F. & Wilhelm, P., 2001, in: *Gießerei-Praxis*. 8, S. 319-323

SiC-Si₃N₄ Nanocomposite Prepared by the Addition of SiO₂+C

Sagaljik, P., Hnatko, M., Lences, Z., Warbichler, P. & Hofer, F., 2001, in: *Zeitschrift für Metallkunde*. 8, S. 937-941

Transport properties of La_{0.4}Sr_{0.6}CoO₃-

Bucher, E., Jantscher, W., Benisek, A., Preis, W., Rom, I. & Hofer, F., 2001, in: *Solid State Ionics*. 141-142, S. 375-380

Quantitative Energy-Filtering Transmission Electron Microscopy (EFTEM)

Hofer, F., Grogger, W., Warbichler, P. & Papst, I., 1 Dez. 2000, in: *Microchimica Acta*. 132, 2-4, S. 273-288 16 S.

Quantitative energy-filtering transmission electron microscopy in materials science

Grogger, W., Hofer, F., Warbichler, P. & Kothleitner, G., 1 März 2000, in: *Microscopy and Microanalysis*. 6, 2, S. 161-172 12 S.

EFTEM and EELS analysis of a Pt/NiO interface

Grogger, W., Hofer, F., Kraus, B., Rom, I., Sitte, W. & Warbichler, P., 1 Jan. 2000, in: *Microchimica Acta*. 133, 1-4, S. 125-129 5 S.

A modified ion-beam technique for preparing micro-/nanostructured materials and thin-films

Goriup, M., Reichmann, K., Hayn, G., Hofer, F., Mirtl, C. & Saf, R., 2000, *9. Österreichische Chemietage*. Innsbruck: ., S. PO127-PO127

Analytical electron microscopy- an ultimate tool for exploring the environmental living conditions 5300 years ago and nowadays

Pabst, M. A., Mitterbauer, C., Letofsky-Papst, I. & Hofer, F., 2000, *Microbeam analysis 2000*. Williams, D. B. & Shimizu, R. (Hrsg.). Bristol [u.a.]: IOP Publishing Ltd., Band 165. S. 189-190 (Institute of Physics conference series).

Atom Probe Field Ion Microscopy Investigation of Boron Containing Martensitic 9% Chromium Steel

Hofer, F., Miller, M. K., Babu, S. S., David, S. A. & Cerjak, H.-H., 2000, in: *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*. 31A, S. 975-975

Characterization of Ni-Pt-O Microstructures by Analytical Electron Microscopy

Rom, I., Schröder, A., Hofer, F., Sitte, W. & Grogger, W., 2000, *Mass and Charge Transport in Inorganic Materials*. Faenza: Techna, Band 29. S. 621-626 (Advances in science and technology).

EFTEM tells us what the Tyrolean Iceman inhaled 5300 years ago

Mitterbauer, C., Hofer, F., Letofsky-Papst, I. & Papst, M. A., 2000.

EFTEM tells us what the Tyrolean Iceman inhaled 5300 years ago

Hofer, F., Mitterbauer, C., Letofsky-Papst, I. & Papst, M. A., 2000, *European Congress on Electron Microscopy*. Czechoslovak Soc. for Electron Microscopy, S. 413-414

Electron energy-loss near edge fine structures (ELNES) on the nitrogen K-edge in vanadium nitrides

Warbichler, P., Hofer, F. & Kolbesen, B., 2000.

Electron Microscopy study of Sn/SnSb composite electrodes for lithium-ion batteries

Rom, I., Letofsky-Papst, I., Schmied, M., Hofer, F., Wachtler, M., Besenhard, J. & Winter, M., 2000, *European Congress on Electron Microscopy*. Czechoslovak Society for Electron Microscopy, S. 605-606

Energiefilterung und Elektronenenergieverlustspektroskopie

Hofer, F. (Herausgeber), Mayer, J. (Herausgeber) & Kohl, H. (Herausgeber), 2000, Graz: .

Micro-Characterisation and Orientation- Relationship of two Carbide-Phases of S 6-5-2-5 High Speed Steel

Letofsky-Papst, I., Warbichler, P., Hofer, F. & Prantl, W., 2000, *European Congress on Electron Microscopy*. Czechoslovak Society for Electron Microscopy, S. 491-492

Micro-Characterisation and Orientation-Relationship of two Carbide-Phases of S6-5-2-5 High Speed Steel

Letofsky-Papst, I., Warbichler, P., Hofer, F. & Prantl, W., 2000.

Negative electrode materials for rechargeable lithium batteries-influence of graphite surface modification on the formation of the solid electrolyte interphase

Buqa, H., Blyth, R. I. R., Golob, P., Santis Alvarez, M. V., Hofer, F., Netzer, F. P., Ramsey, M. J., Winter, M. & Besenhard, J., 2000, in: *Ionics*. 6, 3+4, S. 172-179

Orientation-relationship of different carbide-phases in a speed Steel

Letofsky-Papst, I., Warbichler, P., Hofer, F. & Prantl, W., 2000.

Oxygen Exchange Experiments on La_{1-x}Sr_xCoO₃- as Cathode Material for Solid Oxide Fuel Cells

Bucher, E., Jantscher, W., Benisek, A., Bitschnau, B., Sitte, W., Rom, I. & Hofer, F., 2000, *Proceedings / Vol. 2*. Oberrohrdorf: European Fuel Cell Forum, S. 687-696

Quantification of precipitates in a 10%Cr steel using TEM and EFTEM

Hofer, F., Cerjak, H.-H. & Warbichler, P., 2000, in: *Materials Science and Technology*. 16, S. 1221-1225

Quantitative compositional mapping with EFTEM: Applications to advanced materials

Hofer, F., Kothleitner, G., Grogger, W. & Warbichler, P., 2000, *Advanced materials 2000*. Tsukuba: National Institute for Research in Inorganic Materials, S. 21-22

Comparison between quantitative EELS and APFIM microanalysis of carbonitride grains in cermets

Zackrisson, J., Grogger, W., Hofer, F. & Andren, H. O., 1 Dez. 1999, in: *Doktorsavhandlingar vid Chalmers Tekniska Hogskola*. 1494, S. 1-8 8 S.

A comparison between quantitative EELS and APFIM microanalysis of carbonitride grains in cermets

Zackrisson, J., Grogger, W., Hofer, F. & Andrén, H. O., 1 Sept. 1999, in: *Ultramicroscopy*. 79, 1-4, S. 273-281 9 S.

Chromium interaction with TiO₂ dispersoids in oxide dispersion strengthened ferritic steel

Krajnikov, A. V., Ortner, H. M., Weinbruch, S., Grogger, W., Warbichler, P., Hofer, F. & Yurchenko, V. M., 1 Jan. 1999, in: *Materials Science and Technology*. 15, 12, S. 1425-1432 8 S.

Thin-film zinc/manganese dioxide electrodes based on microporous polymer foils

Barbic, P. A., Binder, L., Voss, S., Hofer, F. & Grogger, W., 1 Jan. 1999, in: *Journal of Power Sources*. 79, 2, S. 271-276
6 S.

Analytische Elektronenmikroskopie an nanostrukturierten Sn/SnSb-Kompositelektroden

Letofsky-Papst, I., Rom, I., Hofer, F., Wachtler, M., Besenhard, J. & Winter, M., 1999, *Abstracts der 29. Tagung der Deutschen Gesellschaft für Elektronenmikroskopie*. Urban & Fischer, Band 110, Suppl. 8. S. 31-31 (Optik - international journal for light and electron optics).

Analytische Elektronenmikroskopie an Nanostrukturierten Sn/SnSb-Kompositelektroden

Rom, I., Letofsky-Papst, I., Hofer, F., Wachtler, M., Besenhard, J. & Winter, M., 1999.

Analytische Transmissionselektronenmikroskopie am Beispiel des Schnellarbeitsstahles S6-5-2-5

Letofsky-Papst, I., Warbichler, P., Hofer, F. & Pöckl, G., 1999, *Metalle : Symposium 8*. Weinheim: Wiley-VCH, S. 419-424

Composite electrodes for Lithium Ion Batteries containing Nano-Sized Lithium Storage Metals

Wachtler, M., Letofsky-Papst, I., Hofer, F., Winter, M. & Besenhard, J., 1999, *Solid state ionics 12*. Amsterdam: North-Holland Publ Co, S. 127-128

EFTEM-the ultimate tool for the characterization of nanoparticles and nanolayers

Schmied, M., Hofer, F., Letofsky-Papst, I. & Rom, I., 1999.

Elemental mapping of semiconductor devices using energyfiltering transmission electron microscopy

Grogger, W., Hofer, F., Warbichler, P. & Leitner, O., 1999, *Microscopy of semiconducting materials 1999*. Bristol: Institute of Physics Publ., Band 164. S. 35-38 (Institute of Physics conference series).

Identifizierung der modifizierten z-Phase mittels konvergenter Elektronenbeugung

Letofsky-Papst, I., Warbichler, P., Hofer, F., Schaffernak, B. & Letofsky, E., 1999, *Abstracts der 29. Tagung der Deutschen Gesellschaft für Elektronenmikroskopie*. Urban & Fischer: ., Band 110, Suppl.8. S. 71-71 (Optik - international journal for light and electron optics).

Lithium storage alloys as anodes for lithium ion cells

Winter, M., Wachtler, M., Yang, J., Albering, J., Evers, B., Schneider, I., Hofer, F., Papst, I. & Besenhard, J., 1999, in: *ITE Battery Letters*. 1, 2, S. 140-149

Microstructure of Fe-Nd-B Alloys Tailored to Approach Theoretical Coercivity Limits

Krishnan, K. M., Girt, E., Nelson, E. C., Thomas, G. & Hofer, F., 1999, *Microscopy and Microanalysis*. New York, NY: Springer, Band 5, Suppl. 2. S. 26-27 (Microscopy and microanalysis).

Quantitative compositional imaging with energy-filtering TEM

Hofer, F., Grogger, W., Kothleitner, G. & Warbichler, P., 1999, *Institute of Physics Electron Microscopy and Analysis Group Conference*. ., S. 169-173

Quantitative Energy-Filtering Transmission Electron Microscopy

Hofer, F., Grogger, W., Warbichler, P. & Letofsky-Papst, I., 1999, *Modern Developments and Applications in Microbeam Analysis*. ., S. 165-186

The carbon anode/electrolyte interface in lithium ion cells

Winter, M., Buqa, H., Evers, B., Hodal, T., Möller, K.-C., Reisinger, C., Santis Alvarez, M. V., Schneider, I., Wrodnigg, G., Netzer, F. P., Blyth, R. I. R., Ramsey, M. G., Golob, P., Hofer, F., Grogger, C., Kern, W., Saf, R. & Besenhard, J., 1999, in: *ITE Battery Letters*. 1-2, S. 129-139

The environment of the Tyrolean Iceman as revealed by deposits in his lung

Pabst, M. A. & Hofer, F., 1999, *Multinational Congress on Electron Microscopy.*, S. 41-46

Characterisation of thick film Ti/Al nanolaminates

Coast-Smith, L., Brydson, R., Tsakiroopoulos, P., Hofer, F., Grogger, W., Dunford, D. V. & Ward-Closer, C. M., 1 Feb. 1998, in: *Micron.* 29, 1, S. 17-31 15 S.

Quantitative chemical phase analysis of EFTEM elemental maps using scatter diagrams

Grogger, W., Hofer, F. & Kothleitner, G., 1 Feb. 1998, in: *Micron.* 29, 1, S. 43-51 9 S.

Imaging of the core-shell structure of doped BaTiO₃-ceramics by energy-filtering TEM

Grogger, W., Hofer, F., Warbichler, P., Feltz, A. & Ottlinger, M., 1998, in: *Physica Status Solidi (A) - Applications and Materials Science.* 166, S. 315-325

On the Application of Energy-Filtering TEM in Materials Science: III. Precipitates in Steel

Warbichler, P., Hofer, F., Hofer, P., Letofsky, E. & Cerjak, H.-H., 1998, in: *Micron.* S. 63-72

Optimization of the Signal to Noise Ratio in EFTEM Elemental Maps with Regard to Different Ionization Edge Types

Kothleitner, G. & Hofer, F., 1998, in: *Micron.* 29, S. 349-357

Quantitative Chemical Phase Imaging by Means of Energy Filtering Transmission Electron Microscopy

Grogger, W., Hofer, F. & Kothleitner, G., 1 Dez. 1997, in: *Microchimica Acta.* 125, 1-4, S. 13-19 7 S.

Charakterisierung von inneren Grenzflächen in High-Tech Werkstoffen mit Nanometer Auflösung

Hofer, F., 1997, .

Comparison of Different Methods for Applying La-Ni-Co-Oxide Films on PTCR-Ceramics

Trummer, B., Reichmann, K., Fruhwirth, O., Hofer, F., Warbichler, P. & Pölt, P., 1997, in: *Key Engineering Materials.* 132-136, S. 1349-1352

Co-sputtered films within the quasi-binary system TiN-TiB₂

Losbichler, P., Mitterer, C., Gibson, P. N., Gissler, W., Hofer, F. & Warbichler, P., 1997, in: *Surface and Coatings Technology.* 94-95, S. 297-302

Observation of the mixed dynamic form factor in the AgM_{4,5}-edge

Holzl, M., Botton, G., Nelhiebel, M., Humphreys, C. J., Jouffrey, B., Grogger, W., Hofer, F. & Schattschneider, P., 1997, *Electron Microscopy And Analysis 1997.* Rodenburg, J. (Hrsg.). S. 171-174 4 S.

Quantitative analysis of EFTEM elemental distribution images

Hofer, F., Grogger, W., Kothleitner, G. & Warbichler, P., 1997, in: *Ultramicroscopy.* 67, S. 83-103

Advantageous combination of analytical-electron-microscopy methods for human lung-dust analysis

Pabst, M.-A. & Hofer, F., 1996, in: *Journal of Computer Assisted Microscopy.* 8, S. 189-192

Application of electron spectroscopic imaging in materials science

Hofer, F. & Warbichler, P., 1996, in: *Electron Optics Bulletin.* 134, S. 1-8

Charakterisierung von Hartstoff- und Isolierschichten

Hofer, F., 1996, .

Ionization cross-sections for the L_{2,3} edges of the elements Sr to Mo

Hofer, F., Kothleitner, G. & Rez, P., 1996, in: *Ultramicroscopy.* 63, S. 239-245

On the application of energy-filtering TEM in materials science. II. Study of a fibre-reinforced metal matrix compound
Brydson, R., Hofer, F., Upadhyaya, D., Kothleitner, G., Ward-Close, C., Tsakiroopoulos, P. & Froes, S., 1996, in: *Micron*. 27, S. 107-120

On the detection of MX-precipitates in microalloyed steels using energy filtering TEM
Hofer, F., Warbichler, P., Buchmayr, B. & Kleber, S., 1996, in: *Journal of Microscopy*. 184, S. 163-174

Quantitative microanalysis using electron energy-loss spectrometry: II. Compounds with heavier elements
Hofer, F. & Kothleitner, G., 1996, in: *Microscopy, microanalysis, microstructures*. 7, S. 265-277

Application of electron spectroscopic imaging in materials science
Hofer, F., Warbichler, P., Grogger, W. & Kothleitner, G., 1995, in: *Microscopy and analysis / European edition*. 10, S. 11-13

Diffraction effects in inner-shell ionization edges
Schattschneider, P., Nelhiebel, M., Schenner, M., Grogger, W. & Hofer, F., 1995, in: *Journal of Microscopy*. 183, S. 18-26

Imaging of nanometer-sized precipitates in solids by electron spectroscopic imaging
Hofer, F., Grogger, W. & Warbichler, P., 1995, in: *Ultramicroscopy*. 59, S. 15-31

Inner-shell ionization
Hofer, F., 1995, *Energy-filtering transmission electron microscopy*. 1 Aufl. Berlin Heidelberg: Springer Verlag, Band 71. S. 225-268 (Springer Series in Optical Sciences).

Morphological considerations on metal-graphite-combinations
Hofer, F., 1995, *Active metals*. 1 Aufl. Weinheim New York: VCH, S. 427-446

On the application of energy filtering TEM in materials science: I. Precipitates in a Ni/Cr-alloy
Hofer, F., Warbichler, P., Grogger, W. & Lang, O., 1995, in: *Micron*. 26, 5, S. 377-390 14 S.

Synthesis and characterization of a conjugated polymer with stable radicals in the side groups
Swoboda, P., Saf, R., Hummel, K., Hofer, F. & Czupata, R., 1995, in: *Macromolecules*. 28, 12, S. 4255-4259

Investigation of the rubber-metal bonding system by means of analytical electron microscopy and comparison with results of technical tear strength measurements
Kretschmar, T., Hummel, K., Hofer, F., Grogger, W. & Grubbauer, G., Jan. 1994, in: *Fresenius' Journal of Analytical Chemistry*. 349, 1-3, S. 235-236 2 S.

The formation of silicon carbide films from disilane derivatives
Hengge, E., Zechmann, A., Hofer, F., Pöhl, P. & Lux, B., 1994, in: *Advanced Materials*. 6, S. 584-587

EELS-Microanalysis of the elements Ca to Cu using M_{2,3} edges
Hofer, F. & Wilhelm, P., 1993, in: *Ultramicroscopy*. 49, S. 189-197

L_{2,3} ionization edges of tetrahedrally coordinated transition metal oxyanions
Brydson, R., Garvie, L., Craven, A., Sauer, H., Hofer, F. & Cressey, G., 1993, in: *Journal of Physics: Condensed Matter*. 5, S. 9379-9392

Quantitative microanalysis using electron energy-loss spectroscopy. I. Li and Be in oxides
Hofer, F. & Kothleitner, G., 1993, in: *Microscopy, microanalysis, microstructures*. 4, S. 539-560

Electron energy-loss near-edge structures at the oxygen K edges of titanium IV compounds

Brydson, R., Sauer, H., Engel, W. & Hofer, F., 1992, in: Journal of Physics: Condensed Matter. 4, S. 3429-3437

Preparation of mixtures of Silicon oxynitride and silicon nitride

Hofer, F. & Hengge, E., 1992, in: Advanced Materials. 4, S. 501-504

Comparative investigation of the morphology of nickel- and copper-graphite

Fürstner, A., Hofer, F. & Weidmann, H., 1991, in: Carbon. 29, S. 915-919

Determination of inner-shell cross-sections for EELS-quantification

Hofer, F., 1991, in: Microscopy, microanalysis, microstructures. 2, S. 215-230

Towards a practical method for EELS quantification

Hofer, F. & Luo, B., 1991, in: Ultramicroscopy. 38, S. 159-167

Elektronenenergieverlustspektroskopie - eine neue mikroanalytische Methode in der Elektronenmikroskopie

Hofer, F., 1990, in: Österreichische Chemie-Zeitschrift. 3, S. 76-81

Investigation of multi-layer coatings on cemented carbide cutting tools by analytical electron microscopy

Hofer, F., Warbichler, P., Anderson, P. B. & Pitonak, R., 1990, in: Microchimica Acta. II, S. 243-249

A comparison of theoretical and experimental L and M cross-sections

Auerhammer, J., Rez, P. & Hofer, F., 1989, in: Ultramicroscopy. 30, S. 365-370

AEM investigation of ceramic protective coatings on hard metal tools

Hofer, F., Warbichler, P., Anderson, P. B. & Pitonak, R., 1989, in: Praktische Metallographie/Practical Metallography. 26, S. 506-517

EELS quantification of M edges by using oxidic standards

Hofer, F., 1989, in: Electron Optics Bulletin. 126, S. 35-38

EELS quantification of the elements Ba to Tm by means of N_{4,5} edges

Hofer, F., 1989, in: Journal of Microscopy. 156, S. 279-283

Preparation, structure, and use of platinum-graphite in hydrogenation reactions

Fürstner, A., Hofer, F. & Weidmann, H., 1989, in: Journal of Catalysis. 118, S. 502-506

Analytical electron microscopy discloses actual structure of zinc-graphite

Fürstner, A., Hofer, F. & Weidmann, H., 1988, in: Dalton Transactions. 8, S. 2023-2026

Beiträge zur Anwendung der Elektronenenergieverlustspektroskopie im Elektronenmikroskop

Hofer, F., 1988, 169 S.

EELS quantification of the elements Sr to W by means of M_{4,5} edges

Hofer, F., Golob, P. & Brunegger, A., 1988, in: Ultramicroscopy. 25, S. 81-84

Electron microscopy of Barium ortho-titanate and the products of its reaction with carbon dioxide

Marks, O., Günter, J. R. & Hofer, F., 1988, in: Reactivity of solids. 6, 2/3, S. 217-230

Microanalytical characterization of a powder metallurgical ledeburitic tool steel by transmission electron microscopy

Hofer, F., 1988, in: Electron Optics Bulletin. 125, S. 5-10

ODS niobium alloy, its properties and applications

Gennari, U., Kny, E., Warbichler, P. & Hofer, F., 1988, *Modern Developments in Powder Metallurgy.* , S. 201-220

Quantification of electron energy-loss spectra with K and L shell ionisation cross-sections

Hofer, F. & Golob, P., 1988, in: *Micron.* 19, S. 73-86

The application of electron energy-loss spectroscopy (EELS) in microregion analysis of heterogenous materials

Hofer, F. & Warbichler, P., 1988, in: *Praktische Metallographie/Practical Metallography.* 25, S. 82-91

A method for preparation of thin corrosion layers of brass for TEM investigations

Hofer, F., 1987, in: *Journal of Microscopy.* 145, S. 225-231

Application of EELS to the microanalysis of materials

Hofer, F. & Warbichler, P., 1987, in: *Microchimica Acta.* I, S. 125-134

Determination of partial scattering cross-sections of M_{4,5} edges by using oxidic standards

Hofer, F., Golob, P. & Brunegger, A., 1987, *Analytical Electron Microscopy.* , S. 119-121

EELS-quantification of M-edges by using oxidic standards

Hofer, F., 1987, in: *Ultramicroscopy.* 21, S. 63-67

New examples for near-edge fine structures in electron energy-loss spectroscopy

Hofer, F. & Golob, P., 1987, in: *Ultramicroscopy.* 21, S. 379-384

Microanalytical characterization of a powder-metallurgical ledeburitic tool steel by TEM

Golob, P. & Hofer, F., 1985, in: *Microchimica Acta. Suppl.*11, S. 351-361

Spinodal decomposition in the gold-nickel system

Hofer, F. & Warbichler, P., 1985, in: *Zeitschrift für Metallkunde.* 76, S. 11-15

Thermodynamic properties of solid gold-nickel alloys

Hofer, F. & Torkar, K., 1982, in: *Zeitschrift für Physikalische Chemie.* 130, S. 229-239

Thermodynamic properties of solid rhodium-nickel alloys

Hofer, F., 1982, in: *Journal of Solid State Chemistry.* 45, S. 303-308

Thermodynamische Untersuchungen am System Gold-Nickel

Hofer, F., 1981, 148 S.

Untersuchungen zum System Cäsiumazid-Strontiumazid-Wasser

Hofer, F., 1979, 50 S.

Verbindungen im System CsN₃-Sr(N₃)₂-H₂O

Krischner, H. & Hofer, F., 1979, in: *Zeitschrift für Anorganische und Allgemeine Chemie.* 455, S. 60-64