



## Research interests

The main field of activity are investigations of thermophysical properties of liquid metals and alloys with various techniques such as subsecond pulse heating, DSC (Differential Scanning Calorimetry), and four point probes. Recently my work-group started levitation experiments with an electromagnetic levitator.

## Research output

1. **Surface Tension and Thermal Conductivity of NIST SRM 1155a (AISI 316L Stainless Steel).** / Pichler, Peter; Leitner, Thomas; Kaschnitz, Erhard; Rattenberger, Johannes; Pottlacher, Gernot.  
In: International Journal of Thermophysics, Vol. 43, No. 5, 66, 05.2022, p. 1-17.
2. **Re-investigation of the Normal Spectral Emissivity at 684.5 nm of Solid and Liquid Molybdenum.** / Eber, Alexander; Pichler, Peter; Pottlacher, Gernot.  
In: International Journal of Thermophysics, Vol. 42, No. 2, 17, 02.2021.
3. **Surface Tension and Density of Liquid Hot Work Tool Steel W360 by voestalpine BÖHLER Edelstahl GmbH & Co KG Measured with an Electromagnetic Levitation Apparatus.** / Leitner, Thomas; Werkovits, Anna; Kleber, Siegfried; Pottlacher, Gernot R.  
In: International Journal of Thermophysics, Vol. 42, No. 2, 16, 2021.
4. **Density of Liquid Iridium and Rhenium from Melting up to the Critical Point.** / Leitner, M.; Pottlacher, G.  
In: International Journal of Thermophysics, Vol. 41, No. 10, 139, 01.10.2020.
5. **Measurements of thermophysical properties of solid and liquid NIST SRM 316L stainless steel.** / Pichler, Peter; Simonds, Brian J.; Sowards, Jeffrey W.; Pottlacher, Gernot.  
In: Journal of Materials Science, Vol. 55, No. 9, 03.2020, p. 4081 - 4093.
6. **The liquid AlCu4TiMg alloy: thermophysical and thermodynamic properties.** / Plevachuk, Yuriy; Sklyarchuk, V.; Pottlacher, Gernot R.; Leitner, Thomas; Svec Sr., Peter; Svec, Peter; Orovcik, Lubomir; Dufanets, Marta; Yakymovych, A.  
In: High Temperatures, High Pressures, Vol. 49, No. 1-2, 01.01.2020, p. 61 - 73.
7. **Surface tension of liquid nickel: Re-evaluated and revised data.** / Werkovits, Anna; Leitner, Thomas; Pottlacher, Gernot R.  
In: High Temperatures, High Pressures, Vol. 49, No. 1-2, 01.2020, p. 107-124.
8. **Density of Liquid Niobium and Tungsten and the Estimation of Critical Point Data.** / Leitner, M.; Pottlacher, G.  
In: Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, Vol. 2019, No. 50, 01.07.2019, p. 3646-3653.
9. **Preparation Method of Spherical and Monocrystalline Aluminum Powder.** / Skalon, Mateusz; Hebda, Marek; Buzolin, Ricardo; Pottlacher, Gernot; Mitsche, Stefan; Sommitsch, Christof.  
In: Metals, Vol. 9, No. 3, 375, 23.03.2019.
10. **Density of Liquid Tantalum and Estimation of Critical Point Data.** / Leitner, M.; Schröer, W.; Pottlacher, G.  
In: International Journal of Thermophysics, Vol. 39, No. 11, 124, 01.11.2018.

## Activities

1. **Pottlachers Experimentiervorlesung**  
Gernot Pottlacher (Speaker) & Peter Pichler (Speaker)  
8 Jul 2021
2. **Pottlachers Experimentiervorlesung**  
Gernot Pottlacher (Speaker) & Peter Pichler (Speaker)  
17 Jun 2021
3. **The Journal of Chemical Thermodynamics (Journal)**  
Gernot Pottlacher (Peer reviewer)  
Jun 2021 → Jul 2021

4. **Technisches Messen (Journal)**  
Gernot Pottlacher (Peer reviewer)  
15 Apr 2021 → 27 Apr 2021
5. **Journal of nuclear materials (Journal)**  
Gernot Pottlacher (Peer reviewer)  
Apr 2021 → May 2021
6. **npj Microgravity (Journal)**  
Gernot Pottlacher (Peer reviewer)  
Apr 2021 → May 2021
7. **Crystals (Journal)**  
Gernot R. Pottlacher (Peer reviewer)  
1 Jan 2021 → 31 Dec 2021
8. **High Temperatures, High Pressures (Journal)**  
Gernot R. Pottlacher (Peer reviewer)  
1 Jan 2021 → 31 Dec 2021
9. **International Journal of Thermophysics (Journal)**  
Gernot Pottlacher (Editorial board member)  
1 Jan 2021 → 31 Dec 2021
10. **International Journal of Thermophysics (Journal)**  
Gernot Pottlacher (Peer reviewer)  
Jan 2021

## Projects

1. **Surfacetension-Steel - Measurement of surface tension and density of liquid steel by means of electromagnetic levitation**  
Pottlacher, G. & Leitner, T.  
1/10/16 → 30/06/21
2. **FWF - Levitation - Measurement of surface tension and density by means of levitation**  
Aziz, K., Pottlacher, G. & Schmon, A.  
1/08/11 → 31/07/16
3. **Metallic Melts 2 - Electrical Resistivity Measurement of High Temperature Metallic Melts- Part 2**  
Hüpf, T., Cagran, C. & Pottlacher, G.  
1/09/08 → 31/07/15
4. **Lorenz-Zahl - B2: Lorenz-number and thermal diffusivity of high-alloyed steels**  
Reschab, H. C. & Pottlacher, G.  
1/10/07 → 31/03/11
5. **High Temperature Metallic Melt - Electrical Resistivity Measurement of High Temperature Metallic Melts**  
Cagran, C., Hüpf, T. & Pottlacher, G.  
1/11/06 → 30/04/08
6. **Best. thermophys. Daten von St. - Experimentelle Bestimmung thermophysikalischer Daten von Stählen und Nickelbasislegierungen**  
Wilthan, B. & Pottlacher, G.  
1/01/06 → 30/06/07
7. **Microsecond Laser Polarimetry for Emissivity Measurements on Liquid Metals and Alloys at High Temperatures**  
Wilthan, B., Cagran, C. & Pottlacher, G.  
1/09/01 → 31/08/05
8. **Determination of normal spectral emissivity at 684.5 nm of liquid metals**  
Pottlacher, G.  
1/09/98 → 31/08/01