

# Sebastian Hamel

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9214400/publications.pdf>

Version: 2024-02-01

25  
papers

1,322  
citations

394421

19  
h-index

580821

25  
g-index

25  
all docs

25  
docs citations

25  
times ranked

1542  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nanosecond X-ray diffraction of shock-compressed superionic water ice. <i>Nature</i> , 2019, 569, 251-255.	27.8	215
2	Experimental evidence for superionic water ice using shock compression. <i>Nature Physics</i> , 2018, 14, 297-302.	16.7	165
3	Solid Iron Compressed Up to 560 GPa. <i>Physical Review Letters</i> , 2013, 111, 065501.	7.8	137
4	Multiphase equation of state for carbon addressing high pressures and temperatures. <i>Physical Review B</i> , 2014, 89, .	3.2	127
5	Shock vaporization of silica and the thermodynamics of planetary impact events. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	91
6	Uranus evolution models with simple thermal boundary layers. <i>Icarus</i> , 2016, 275, 107-116.	2.5	84
7	Chemical processes in the deep interior of Uranus. <i>Nature Communications</i> , 2011, 2, 203.	12.8	74
8	Analysis of laser shock experiments on precompressed samples using a quartz reference and application to warm dense hydrogen and helium. <i>Journal of Applied Physics</i> , 2015, 118, .	2.5	69
9	Planetary Ices and the Linear Mixing Approximation. <i>Astrophysical Journal</i> , 2017, 848, 67.	4.5	54
10	Measuring the melting curve of iron at super-Earth core conditions. <i>Science</i> , 2022, 375, 202-205.	12.6	39
11	Superionic Phases of the 1:1 Water–Ammonia Mixture. <i>Journal of Physical Chemistry A</i> , 2015, 119, 10582-10588.	2.5	36
12	Nanosecond Freezing of Water at High Pressures: Nucleation and Growth near the Metastability Limit. <i>Physical Review Letters</i> , 2018, 121, 155701.	7.8	29
13	Determination of a Density Functional Tight Binding Model with an Extended Basis Set and Three-Body Repulsion for Carbon Under Extreme Pressures and Temperatures. <i>Journal of Physical Chemistry C</i> , 2013, 117, 7885-7894.	3.1	28
14	Shock Compression of Liquid Deuterium up to 1ÂTPa. <i>Physical Review Letters</i> , 2019, 122, 255702.	7.8	26
15	Phase behaviours of superionic water at planetary conditions. <i>Nature Physics</i> , 2021, 17, 1228-1232.	16.7	26
16	Optical and transport properties of dense liquid silica. <i>Physics of Plasmas</i> , 2015, 22, 062706.	1.9	22
17	Measuring the shock impedance mismatch between high-density carbon and deuterium at the National Ignition Facility. <i>Physical Review B</i> , 2018, 97, .	3.2	21
18	Extraction of effective solid-liquid interfacial free energies for full 3D solid crystallites from equilibrium MD simulations. <i>Journal of Chemical Physics</i> , 2017, 147, 194704.	3.0	19

#	ARTICLE	IF	CITATIONS
19	Recreating Giants Impacts in the Laboratory: Shock Compression of Bridgmanite to 14 Mbar. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL085476.	4.0	19
20	Two-phase equation of state for lithium fluoride. <i>Journal of Chemical Physics</i> , 2019, 150, 074506.	3.0	10
21	Real-space formulation of the stress tensor for O(N) density functional theory: Application to high temperature calculations. <i>Journal of Chemical Physics</i> , 2020, 153, 034112.	3.0	10
22	High-precision shock equation of state measurements for metallic fluid carbon between 15 and 20 Mbar. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	7
23	Evidence for Dissociation and Ionization in Shock Compressed Nitrogen to 800ÅGPa. <i>Physical Review Letters</i> , 2022, 129, .	7.8	7
24	Accurate parameterization of the kinetic energy functional. <i>Journal of Chemical Physics</i> , 2022, 156, 024110.	3.0	5
25	Accurate parameterization of the kinetic energy functional for calculations using exact-exchange. <i>Journal of Chemical Physics</i> , 2022, 156, 024107.	3.0	2