Hemant Kumar

List of Publications by Year
in descending order

25 papers	1,869 citations	361296 20 h-index	610775 24 g-index
25 all docs	25 docs citations	25 times ranked	3063 citing authors

#	Article	IF	Citations
1	Tunable strain soliton networks confine electrons in van der Waals materials. Nature Physics, 2020, 16, 1097-1102.	6.5	47
2	Biomolecular sensing by surface-enhanced Raman scattering of monolayer Janus transition metal dichalcogenide. Nanoscale, 2020, 12, 10723-10729.	2.8	27
3	Highâ€Rate and Long Cycleâ€Life Alloyâ€Type Magnesiumâ€Ion Battery Anode Enabled Through (De)magnesiationâ€Induced Nearâ€Roomâ€Temperature Solidâ€“Liquid Phase Transformation. Advanced Energy Materials, 2019, 9, 1902086.	10.2	54
4	Predicted Magnetic Properties of MXenes. , 2019, , 291-300.		1
5	Degradation of magnesium-ion battery anodes by galvanic replacement reaction in all-phenyl complex electrolyte. Journal of Energy Storage, 2019, 23, 195-201.	3.9	21
6	Magnesiumâ€Ion Batteries: Highâ€Rate and Long Cycleâ€Life Alloyâ€Type Magnesiumâ€Ion Battery Anode Enabled Through (De)magnesiationâ€Induced Nearâ€Roomâ€Temperature Solidâ€“Liquid Phase Transformation (Adv.) Tj ETQq0 0 0 rgBT /Overlo	10.4	2
7	Surface-Engineered MXenes: Electric Field Control of Magnetism and Enhanced Magnetic Anisotropy. ACS Nano, 2019, 13, 2831-2839.	7.3	126
8	In Situ Dealloying of Bulk Mg₂Sn in Mg-Ion Half Cell as an Effective Route to Nanostructured Sn for High Performance Mg-Ion Battery Anodes. Chemistry of Materials, 2018, 30, 1815-1824.	3.2	80
9	Prediction of optimal structural water concentration for maximized performance in tunnel manganese oxide electrodes. Physical Chemistry Chemical Physics, 2018, 20, 9480-9487.	1.3	12
10	Phase Transition in Monolayer Water Confined in Janus Nanopore. Langmuir, 2018, 34, 12199-12205.	1.6	18
11	Prediction of Enhanced Catalytic Activity for Hydrogen Evolution Reaction in Janus Transition Metal Dichalcogenides. Nano Letters, 2018, 18, 3943-3949.	4.5	267
12	Effect of cobalt content on the electrochemical properties and structural stability of NCA type cathode materials. Physical Chemistry Chemical Physics, 2018, 20, 22805-22817.	1.3	27
13	Tuning Noncollinear Spin Structure and Anisotropy in Ferromagnetic Nitride MXenes. ACS Nano, 2018, 12, 6319-6325.	7.3	101
14	Tunable Magnetism and Transport Properties in Nitride MXenes. ACS Nano, 2017, 11, 7648-7655.	7.3	276
15	Rational Design of Two-Dimensional Metallic and Semiconducting Spintronic Materials Based on Ordered Double-Transition-Metal MXenes. Journal of Physical Chemistry Letters, 2017, 8, 422-428.	2.1	165
16	Confined Water: Structure, Dynamics, and Thermodynamics. Accounts of Chemical Research, 2017, 50, 2139-2146.	7.6	168
17	Fundamental Mechanisms of Solvent Decomposition Involved in Solid-Electrolyte Interphase Formation in Sodium Ion Batteries. Chemistry of Materials, 2016, 28, 8930-8941.	3.2	108
18	Limits of Coherency and Strain Transfer in Flexible 2D van der Waals Heterostructures: Formation of Strain Solitons and Interlayer Debonding. Scientific Reports, 2016, 6, 21516.	1.6	49

#	Article	IF	Citations
19	Defective Graphene and Graphene Allotropes as High-Capacity Anode Materials for Mg Ion Batteries. ACS Energy Letters, 2016, 1, 638-645.	8.8	73
20	Driving force of water entry into hydrophobic channels of carbon nanotubes: entropy or energy?. Molecular Simulation, 2015, 41, 504-511.	0.9	20
21	Elastic Deformations in 2D van der waals Heterostructures and their Impact on Optoelectronic Properties: Predictions from a Multiscale Computational Approach. Scientific Reports, 2015, 5, 10872.	1.6	76
22	Structure, dynamics and thermodynamics of single-file water under confinement: effects of polarizability of water molecules. RSC Advances, 2015, 5, 1893-1901.	1.7	24
23	Confinement induced stochastic sensing of charged coronene and perylene aggregates in Î±-hemolysin nanochannels. Soft Matter, 2013, 9, 10196.	1.2	4
24	Thermodynamics of water entry in hydrophobic channels of carbon nanotubes. Journal of Chemical Physics, 2011, 134, 124105.	1.2	84
25	Biopolymers in nanopores: challenges and opportunities. Soft Matter, 2011, 7, 5898.	1.2	39