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 Magnetism and Transport Properties in Nitride MXenes. ACS Nano, 2017, 11, 7648-7655.	7.3	276
2	Prediction of Enhanced Catalytic Activity for Hydrogen Evolution Reaction in Janus Transition Metal Dichalcogenides. Nano Letters, 2018, 18, 3943-3949.	4.5	267
3	Confined Water: Structure, Dynamics, and Thermodynamics. Accounts of Chemical Research, 2017, 50, 2139-2146.	7.6	168
4	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
5	Surface-Engineered MXenes: Electric Field Control of Magnetism and Enhanced Magnetic Anisotropy. ACS Nano, 2019, 13, 2831-2839.	7.3	126
6	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
7	Tuning Noncollinear Spin Structure and Anisotropy in Ferromagnetic Nitride MXenes. ACS Nano, 2018, 12, 6319-6325.	7.3	101
8	Thermodynamics of water entry in hydrophobic channels of carbon nanotubes. Journal of Chemical Physics, 2011, 134, 124105.	1.2	84
9	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
10	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
11	Defective Graphene and Graphene Allotropes as High-Capacity Anode Materials for Mg Ion Batteries. ACS Energy Letters, 2016, 1, 638-645.	8.8	73
12	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
13	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
14	Tunable strain soliton networks confine electrons in van der Waals materials. Nature Physics, 2020, 16, 1097-1102.	6.5	47
15	Biopolymers in nanopores: challenges and opportunities. Soft Matter, 2011, 7, 5898.	1.2	39
16	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
17	Biomolecular sensing by surface-enhanced Raman scattering of monolayer Janus transition metal dichalcogenide. Nanoscale, 2020, 12, 10723-10729.	2.8	27
18	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

#	Article	IF	Citations
19	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
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	Phase Transition in Monolayer Water Confined in Janus Nanopore. Langmuir, 2018, 34, 12199-12205.	1.6	18
22	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
23	Confinement induced stochastic sensing of charged coronene and perylene aggregates in Î±-hemolysin nanochannels. Soft Matter, 2013, 9, 10196.	1.2	4
24	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	10.2	2
25	Predicted Magnetic Properties of MXenes. , 2019, , 291-300.		1