Nita Sahai

List of Publications by Year
in descending order

81 papers	4,456 citations	109321 35 h-index	106344 65 g-index
82 all docs	82 docs citations	82 times ranked	5293 citing authors

#	Article	IF	Citations
1	Freshwater and Evaporite Brine Compositions on Hadean Earth: Priming the Origins of Life. Astrobiology, 2022, 22, 641-671.	3.0	3
2	Side Group of Hydrophobic Amino Acids Controls Chiral Discrimination among Chiral Counterions and Metalâ€“Organic Cages. Nano Letters, 2022, 22, 4421-4428.	9.1	5
3	Amino Acid Specific Nonenzymatic Montmorilloniteâ€Promoted RNA Polymerization. ChemSystemsChem, 2021, 3, e2000060.	2.6	5
4	Spatial survey of non-collagenous proteins in mineralizing and non-mineralizing vertebrate tissues ex vivo. Bone Reports, 2021, 14, 100754.	0.4	9
5	A Model Protometabolic Pathway across Protocell Membranes Assisted by Photocatalytic Minerals. Journal of Physical Chemistry C, 2020, 124, 1469-1477.	3.1	11
6	Accuracy of Thermodynamic Databases for Hydroxyapatite Dissolution Constant. Astrobiology, 2020, 20, 157-160.	3.0	5
7	Strong Enantiomeric Preference on the Macroionâ€“Counterion Interaction Induced by Weakly Associated Chiral Counterions. Journal of Physical Chemistry B, 2020, 124, 9958-9966.	2.6	7
8	Toward the Understanding of Small Protein-Mediated Collagen Intrafibrillar Mineralization. ACS Biomaterials Science and Engineering, 2020, 6, 4247-4255.	5.2	11
9	Oligo(<scp>l</scp>-glutamic acids) in Calcium Phosphate Precipitation: Chain Length Effect. Journal of Physical Chemistry B, 2020, 124, 6278-6287.	2.6	4
10	Oligo(<scp>l</scp>-glutamic acids) in Calcium Phosphate Precipitation: Mechanism of Delayed Phase Transformation. Journal of Physical Chemistry B, 2020, 124, 6288-6298.	2.6	7
11	Structureâ€“Activity Relationships of Hydroxyapatite-Binding Peptides. Langmuir, 2020, 36, 2729-2739.	3.5	13
12	Unraveling Chiral Selection in the Self-assembly of Chiral Fullerene Macroions: Effects of Small Chiral Components Including Counterions, Co-ions, or Neutral Molecules. Langmuir, 2020, 36, 4702-4710.	3.5	5
13	Bacterial Membrane Selective Antimicrobial Peptide-Mimetic Polyurethanes: Structureâ€“Property Correlations and Mechanisms of Action. Biomacromolecules, 2019, 20, 4096-4106.	5.4	31
14	A Model Protometabolic Pathway Across Protocell Membranes Assisted by Photocatalytic Minerals. Journal of Physical Chemistry B, 2019, , .	2.6	2
15	Mineralâ€“Lipid Interactions in the Origins of Life. Trends in Biochemical Sciences, 2019, 44, 331-341.	7.5	28
16	Biological Response of and Blood Plasma Protein Adsorption on Silver-Doped Hydroxyapatite. ACS Biomaterials Science and Engineering, 2019, 5, 561-571.	5.2	32
17	Osteocalcin facilitates calcium phosphate ion complex growth as revealed by free energy calculation. Physical Chemistry Chemical Physics, 2018, 20, 13047-13056.	2.8	14
18	The effects of laser shock peening on the mechanical properties and biomedical behavior of AZ31B magnesium alloy. Surface and Coatings Technology, 2018, 339, 48-56.	4.8	78

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19	Essence of Small Molecule-Mediated Control of Hydroxyapatite Growth: Free Energy Calculations of Amino Acid Side Chain Analogues. Journal of Physical Chemistry C, 2018, 122, 4372-4380.	3.1	17
20	Aqueous magnesium as an environmental selection pressure in the evolution of phospholipid membranes on early earth. Geochimica Et Cosmochimica Acta, 2018, 223, 216-228.	3.9	24
21	Structure analysis of collagen fibril at atomic-level resolution and its implications for intra-fibrillar transport in bone biomineralization. Physical Chemistry Chemical Physics, 2018, 20, 1513-1523.	2.8	33
22	Nonenzymatic RNA Oligomerization at the Mineralâ€"Water Interface: An Insight into the Adsorptionâ€"Polymerization Relationship. Journal of Physical Chemistry C, 2018, 122, 29386-29397.	3.1	15
23	Hierarchical structures on nickel-titanium fabricated by ultrasonic nanocrystal surface modification. Materials Science and Engineering C, 2018, 93, 12-20.	7.3	20
24	Quantitatively Identifying the Roles of Interfacial Water and Solid Surface in Governing Peptide Adsorption. Langmuir, 2018, 34, 7932-7941.	3.5	21
25	Protocell Emergence and Evolution. , 2018, , 491-517.		4
26	Mineral Surface Chemistry and Nanoparticle-aggregation Control Membrane Self-Assembly. Scientific Reports, 2017, 7, 43418.	3.3	37
27	Silicates in orthopedics and bone tissue engineering materials. Journal of Biomedical Materials Research - Part A, 2017, 105, 2090-2102.	4.0	50
28	A systematic study of mechanical properties, corrosion behavior and biocompatibility of AZ31B Mg alloy after ultrasonic nanocrystal surface modification. Materials Science and Engineering C, 2017, 78, 1061-1071.	7.3	49
29	Bactericidal Peptidomimetic Polyurethanes with Remarkable Selectivity against <i>Escherichia coli</i>. ACS Biomaterials Science and Engineering, 2017, 3, 2588-2597.	5.2	40
30	Predicting the Structureâ€"Activity Relationship of Hydroxyapatite-Binding Peptides by Enhanced-Sampling Molecular Simulation. Langmuir, 2016, 32, 7009-7022.	3.5	39
31	Incubating Life: Prebiotic Sources of Organics for the Origin of Life. Elements, 2016, 12, 401-406.	0.5	31
32	The Transition from Geochemistry to Biogeochemistry. Elements, 2016, 12, 389-394.	0.5	28
33	Orthosilicic acid, Si(OH)4, stimulates osteoblast differentiation in vitro by upregulating miR-146a to antagonize NF-Î°B activation. Acta Biomaterialia, 2016, 39, 192-202.	8.3	59
34	Isoexergonic Conformations of Surface-Bound Citrate Regulated Bioinspired Apatite Nanocrystal Growth. ACS Applied Materials & Interfaces, 2016, 8, 28116-28123.	8.0	20
35	Surface amorphization of NiTi alloy induced by Ultrasonic Nanocrystal Surface Modification for improved mechanical properties. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 53, 455-462.	3.1	60
36	Biomimetic and nanostructured hybrid bioactive glass. Biomaterials, 2015, 50, 1-9.	11.4	22

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37	A potential mechanism for amino acid-controlled crystal growth of hydroxyapatite. Journal of Materials Chemistry B, 2015, 3, 9157-9167.	5.8	65
38	Molecular mechanisms for intrafibrillar collagen mineralization in skeletal tissues. Biomaterials, 2015, 39, 59-66.	11.4	89
39	Synergism and Mutualism in Non-Enzymatic RNA Polymerization. Life, 2014, 4, 598-620.	2.4	15
40	Adsorption of l-glutamic acid and l-aspartic acid to Î³-Al2O3. Geochimica Et Cosmochimica Acta, 2014, 133, 142-155.	3.9	36
41	Surface Energetics of the Hydroxyapatite Nanocrystalâ€“Water Interface: A Molecular Dynamics Study. Langmuir, 2014, 30, 13283-13292.	3.5	56
42	Small moleculeâ€mediated control of hydroxyapatite growth: Free energy calculations benchmarked to density functional theory. Journal of Computational Chemistry, 2014, 35, 70-81.	3.3	42
43	Crystal structures of CaSiO3 polymorphs control growth and osteogenic differentiation of human mesenchymal stem cells on bioceramic surfaces. Biomaterials Science, 2013, 1, 1101.	5.4	31
44	Reactive oxygen species at the oxide/water interface: Formation mechanisms and implications for prebiotic chemistry and the origin of life. Earth and Planetary Science Letters, 2013, 363, 156-167.	4.4	50
45	Did Mineral Surface Chemistry and Toxicity Contribute to Evolution of Microbial Extracellular Polymeric Substances?. Astrobiology, 2012, 12, 785-798.	3.0	25
46	A computational study of Mg2+ dehydration in aqueous solution in the presence of HSâˆ' and other monovalent anions â€" Insights to dolomite formation. Geochimica Et Cosmochimica Acta, 2012, 88, 77-87.	3.9	23
47	Mineralâ€“organic interfacial processes: potential roles in the origins of life. Chemical Society Reviews, 2012, 41, 5502.	38.1	205
48	Neutron reflectivity study of substrate surface chemistry effects on supported phospholipid bilayer formation on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:mrow><mml:mo		

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55	Inorganic synthesis of Feâ€"Caâ€"Mg carbonates at low temperature. Geochimica Et Cosmochimica Acta, 2009, 73, 5361-5376.	3.9	73
56	Role of Oxide Surface Chemistry and Phospholipid Phase on Adsorption and Self-Assembly: Isotherms and Atomic Force Microscopy. Journal of Physical Chemistry C, 2009, 113, 2187-2196.	3.1	40
57	Role of Fe(II), phosphate, silicate, sulfate, and carbonate in arsenic uptake by coprecipitation in synthetic and natural groundwater. Water Research, 2008, 42, 615-624.	11.3	95
58	Nanominerals, Mineral Nanoparticles, and Earth Systems. Science, 2008, 319, 1631-1635.	12.6	768
59	Oxide-Dependent Adsorption of a Model Membrane Phospholipid, Dipalmitoylphosphatidylcholine:â€‰ Bulk Adsorption Isotherms. Langmuir, 2008, 24, 4865-4873.	3.5	37
60	Role of Fe(II) and phosphate in arsenic uptake by coprecipitation. Geochimica Et Cosmochimica Acta, 2007, 71, 3193-3210.	3.9	62
61	Mechanisms of Amine-Catalyzed Organosilicate Hydrolysis at Circum-Neutral pH. Journal of Physical Chemistry B, 2006, 110, 17819-17829.	2.6	28
62	Cyclic silicate active site and stereochemical match for apatite nucleation on pseudowollastonite bioceramicâ€"bone interfaces. Biomaterials, 2005, 26, 5763-5770.	11.4	68
63	Interactions of Silicate Ions with Zinc(II) and Aluminum(III) in Alkaline Aqueous Solution. Inorganic Chemistry, 2005, 44, 8023-8032.	4.0	56
64	29Si NMR sensitivity enhancement methods for the quantitative study of organosilicate hydrolysis and condensation. Journal of Non-Crystalline Solids, 2005, 351, 2244-2250.	3.1	13
65	Amine-Catalyzed Biomimetic Hydrolysis and Condensation of Organosilicate. Chemistry of Materials, 2005, 17, 3221-3227.	6.7	68
66	Arsenic Occurrence, Mobility, and Retardation in Sandstone and Dolomite Formations of the Fox River Valley, Eastern Wisconsin. Environmental Science & Technology, 2004, 38, 5087-5094.	10.0	27
67	Calculation of 29Si NMR shifts of silicate complexes with carbohydrates, amino acids, and muhicarboxylic acids: potential role in biological silica utilization. Geochimica Et Cosmochimica Acta, 2004, 68, 227-237.	3.9	23
68	The effects of Mg2+ and H+ on apatite nucleation at silica surfaces. Geochimica Et Cosmochimica Acta, 2003, 67, 1017-1030.	3.9	8
69	Is Silica Really an Anomalous Oxide? Surface Acidity and Aqueous Hydrolysis Revisited. Environmental Science & Technology, 2002, 36, 445-452.	10.0	87
70	29Si NMR Shifts and Relative Stabilities Calculated for Hypercoordinated Siliconâ^'Polyalcohol Complexes:Â Role in Solâ^'Gel and Biogenic Silica Synthesis. Inorganic Chemistry, 2002, 41, 748-756.	4.0	14
71	Biomembrane Phospholipidâ€"Oxide Surface Interactions: Crystal Chemical and Thermodynamic Basis. Journal of Colloid and Interface Science, 2002, 252, 309-319.	9.4	30
72	Formation energies and NMR chemical shifts calculated for putative serine-silicate complexes in silica biomineralization. Geochimica Et Cosmochimica Acta, 2001, 65, 2043-2053.	3.9	26

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73	X-Ray Absorption Spectroscopy of Strontium(II) Coordination. Journal of Colloid and Interface Science, 2000, 222, 198-212.	9.4	141
74	X-Ray Absorption Spectroscopy of Strontium(II) Coordination. Journal of Colloid and Interface Science, 2000, 222, 184-197.	9.4	84
75	Calculating the acidity of silanols and related oxyacids in aqueous solution. Geochimica Et Cosmochimica Acta, 2000, 64, 4097-4113.	3.9	62
76	Molecular Orbital Study of Apatite (Ca5(PO4)3OH) Nucleation at Silica Bioceramic Surfaces. Journal of Physical Chemistry B, 2000, 104, 4322-4341.	2.6	62
77	GEOSURF: a computer program for modeling adsorption on mineral surfaces from aqueous solution. Computers and Geosciences, 1998, 24, 853-873.	4.2	53
78	Theoretical prediction of single-site enthalpies of surface protonation for oxides and silicates in water. Geochimica Et Cosmochimica Acta, 1998, 62, 3703-3716.	3.9	65
79	Solvation and electrostatic model for specific electrolyte adsorption. Geochimica Et Cosmochimica Acta, 1997, 61, 2827-2848.	3.9	127
80	Evaluation of internally consistent parameters for the triple-layer model by the systematic analysis of oxide surface titration data. Geochimica Et Cosmochimica Acta, 1997, 61, 2801-2826.	3.9	218
81	Theoretical prediction of single-site surface-protonation equilibrium constants for oxides and silicates in water. Geochimica Et Cosmochimica Acta, 1996, 60, 3773-3797.	3.9	359