Chris Greenwell

List of Publications by Year
in descending order

88 papers	4,600 citations	109321 35 h-index	102487 66 g-index
90 all docs	90 docs citations	90 times ranked	5240 citing authors

#	Article	IF	Citations
1	Placing microalgae on the biofuels priority list: a review of the technological challenges. Journal of the Royal Society Interface, 2010, 7, 703-726.	3.4	680
2	Clay swelling â€" A challenge in the oilfield. Earth-Science Reviews, 2010, 98, 201-216.	9.1	492
3	A critical appraisal of polymerâ€"clay nanocomposites. Chemical Society Reviews, 2008, 37, 568-594.	38.1	369
4	Large-Scale Molecular Dynamics Study of Montmorillonite Clay:â€‰ Emergence of Undulatory Fluctuations and Determination of Material Properties. Journal of Physical Chemistry C, 2007, 111, 8248-8259.	3.1	138
5	On the application of computer simulation techniques to anionic and cationic clays: A materials chemistry perspective. Journal of Materials Chemistry, 2006, 16, 708-723.	6.7	124
6	Catalytic upgrading of tri-glycerides and fatty acids to transport biofuels. Energy and Environmental Science, 2009, 2, 262-271.	30.8	121
7	Computer Simulation Study of the Structural Stability and Materials Properties of DNA-Intercalated Layered Double Hydroxides. Journal of the American Chemical Society, 2008, 130, 4742-4756.	13.7	118
8	Towards a mechanistic understanding of carbon stabilization in manganese oxides. Nature Communications, 2015, 6, 7628.	12.8	102
9	Preparation of zinc oxide free, transparent rubber nanocomposites using a layered double hydroxide filler. Journal of Materials Chemistry, 2011, 21, 7194.	6.7	100
10	Molecular Dynamic Simulations of Montmorilloniteâ€"Organic Interactions under Varying Salinity: An Insight into Enhanced Oil Recovery. Journal of Physical Chemistry C, 2015, 119, 7282-7294.	3.1	100
11	Rule based design of clay-swelling inhibitors. Energy and Environmental Science, 2011, 4, 4572.	30.8	95
12	Mineral surface chemistry control for origin of prebiotic peptides. Nature Communications, 2017, 8, 2033.	12.8	85
13	Recent advances in understanding the structure and reactivity of clays using electronic structure calculations. Computational and Theoretical Chemistry, 2006, 762, 33-48.	1.5	77
14	Recent advances in large-scale atomistic and coarse-grained molecular dynamics simulation of clay minerals. Journal of Materials Chemistry, 2009, 19, 2482.	6.7	74
15	Thermochemical processing of macroalgae: a late bloomer in the development of third-generation biofuels?. Biofuels, 2012, 3, 441-461.	2.4	74
16	Interlayer Structure and Bonding in Nonswelling Primary Amine Intercalated Clays. Macromolecules, 2005, 38, 6189-6200.	4.8	73
17	Wetting Effects and Molecular Adsorption at Hydrated Kaolinite Clay Mineral Surfaces. Journal of Physical Chemistry C, 2016, 120, 11433-11449.	3.1	70
18	Studies of the effects of synthetic procedure on base catalysis using hydroxide-intercalated layer double hydroxides. Catalysis Today, 2006, 114, 397-402.	4.4	65

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19	Theory, modelling and simulation in origins of life studies. Chemical Society Reviews, 2012, 41, 5430.	38.1	65
20	The Water-Alkane Interface at Various NaCl Salt Concentrations: A Molecular Dynamics Study of the Readily Available Force Fields. Scientific Reports, 2018, 8, 352.	3.3	63
21	Clay Minerals Mediate Folding and Regioselective Interactions of RNA: A Large-Scale Atomistic Simulation Study. Journal of the American Chemical Society, 2010, 132, 13750-13764.	13.7	62
22	Understanding Model Crude Oil Component Interactions on Kaolinite Silicate and Aluminol Surfaces: Toward Improved Understanding of Shale Oil Recovery. Energy & Fuels, 2018, 32, 1155-1165.	5.1	62
23	Serpentinization: Connecting Geochemistry, Ancient Metabolism and Industrial Hydrogenation. Life, 2018, 8, 41.	2.4	61
24	A Density Functional Theory Study of Catalytictrans-Esterification bytert-Butoxide MgAl Anionic Clays. Journal of Physical Chemistry B, 2003, 107, 3476-3485.	2.6	60
25	Role of Host Layer Flexibility in DNA Guest Intercalation Revealed by Computer Simulation of Layered Nanomaterials. Journal of the American Chemical Society, 2008, 130, 12485-12495.	13.7	60
26	Layered Double Hydroxide Minerals as Possible Prebiotic Information Storage and Transfer Compounds. Origins of Life and Evolution of Biospheres, 2006, 36, 13-37.	1.9	57
27	Emergence of Undulations and Determination of Materials Properties in Large-Scale Molecular Dynamics Simulation of Layered Double Hydroxides. Chemistry of Materials, 2007, 19, 5510-5523.	6.7	54
28	Ion Adsorption at Clay-Mineral Surfaces: The Hofmeister Series for Hydrated Smectite Minerals. Clays and Clay Minerals, 2016, 64, 472-487.	1.3	52
29	Interaction of Natural Organic Matter with Layered Minerals: Recent Developments in Computational Methods at the Nanoscale. Minerals (Basel, Switzerland), 2014, 4, 519-540.	2.0	48
30	Intercalation and in situ polymerization of poly(alkylene oxide) derivatives within M+-montmorillonite (M = Li, Na, K). Journal of Materials Chemistry, 2006, 16, 1082.	6.7	45
31	Methylene Blue Adsorption on the Basal Surfaces of Kaolinite: Structure and Thermodynamics from Quantum and Classical Molecular Simulation. Clays and Clay Minerals, 2015, 63, 185-198.	1.3	45
32	Copper(II)-mediated thermolysis of alginates: a model kinetic study on the influence of metal ions in the thermochemical processing of macroalgae. Interface Focus, 2013, 3, 20120046.	3.0	41
33	Selection for fitness at the individual or population levels: Modelling effects of genetic modifications in microalgae on productivity and environmental safety. Journal of Theoretical Biology, 2010, 263, 269-280.	1.7	38
34	Monster potential meets potential monster: pros and cons of deploying genetically modified microalgae for biofuels production. Interface Focus, 2013, 3, 20120037.	3.0	37
35	The effect of interbedding on shale reservoir properties. Marine and Petroleum Geology, 2015, 67, 154-169.	3.3	37
36	Multi-technique approach to the petrophysical characterization of Berea sandstone core plugs (Cleveland Quarries, USA). Journal of Petroleum Science and Engineering, 2017, 149, 436-455.	4.2	36

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37	Monomer Adsorption on Kaolinite: Modeling the Essential Ingredients. Journal of Physical Chemistry C, 2012, 116, 22365-22374.	3.1	33
38	Influence of Surface Chemistry and Charge on Mineralâ€“RNA Interactions. Langmuir, 2013, 29, 1573-1583.	3.5	32
39	Computer simulation of interlayer arrangement in cinnamate intercalated layered double hydroxides. Journal of Molecular Structure, 2003, 647, 75-83.	3.6	31
40	Efficient synthesis of ordered organo-layered double hydroxides. Green Chemistry, 2010, 12, 688.	9.0	31
41	Role of Clay Minerals in Oil-Forming Reactions. Journal of Physical Chemistry A, 2010, 114, 3569-3575.	2.5	30
42	Geochemical and lithological controls on a potential shale reservoir: Carboniferous Holywell Shale, Wales. Marine and Petroleum Geology, 2016, 71, 198-210.	3.3	29
43	A one-pot synthesis of hybrid organo-layered double hydroxide catalyst precursors. Green Chemistry, 2006, 8, 1067.	9.0	28
44	Stability of free and mineral-protected nucleic acids: Implications for the RNA world. Geochimica Et Cosmochimica Acta, 2012, 83, 360-378.	3.9	25
45	The nutritional aspects of biorefined Saccharina latissima, Ascophyllum nodosum and Palmaria palmata. Biomass Conversion and Biorefinery, 2017, 7, 221-235.	4.6	25
46	In situ monitoring of crystal growth and dissolution of oriented layered double-hydroxide crystals immobilized on silicon. Journal of Crystal Growth, 2006, 294, 53-59.	1.5	23
47	Biodiesel Production via Trans-Esterification Using Pseudomonas cepacia Immobilized on Cellulosic Polyurethane. ACS Omega, 2018, 3, 6804-6811.	3.5	23
48	Crystal chemistry of natural layered double hydroxides. 5. Single-crystal structure refinement of hydrotalcite, [Mg6Al2(OH)16](CO3)(H2O)4. Mineralogical Magazine, 2019, 83, 269-280.	1.4	22
49	Determining materials properties of natural composites using molecular simulation. Journal of Materials Chemistry, 2009, 19, 7251.	6.7	21
50	Chiral interactions of histidine in a hydrated vermiculite clay. Physical Chemistry Chemical Physics, 2011, 13, 825-830.	2.8	20
51	Synthesis of organo-layered double hydroxides by an environmentally friendly co-hydration route. Green Chemistry, 2007, 9, 1299.	9.0	19
52	Understanding surface interactions in aqueous miscible organic solvent treated layered double hydroxides. RSC Advances, 2017, 7, 5076-5083.	3.6	19
53	Insights into the behaviour of biomolecules on the early Earth: The concentration of aspartate by layered double hydroxide minerals. Geochimica Et Cosmochimica Acta, 2016, 176, 239-258.	3.9	18
54	Aqueous immiscible layered double hydroxides: synthesis, characterisation and molecular dynamics simulation. Chemical Communications, 2018, 54, 4394-4397.	4.1	18

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55	Iron reduction in nontronite-type clay minerals: Modelling a complex system. Geochimica Et Cosmochimica Acta, 2012, 81, 13-27.	3.9	14
56	Osmium uptake, distribution, and 187Os/188Os and 187Re/188Os compositions in Phaeophyceae macroalgae, Fucus vesiculosus: Implications for determining the 187Os/188Os composition of seawater. Geochimica Et Cosmochimica Acta, 2017, 199, 48-57.	3.9	14
57	Understanding Cationic Polymer Adsorption on Mineral Surfaces: Kaolinite in Cement Aggregates. Minerals (Basel, Switzerland), 2018, 8, 130.	2.0	14
58	The design and synthesis of a new potentially C3-symmetric ferrocenylphosphine. Journal of Organometallic Chemistry, 2003, 679, 59-64.	1.8	13
59	The first 1,2,3-tris(phosphinomethyl)ferrocene. Inorganic Chemistry Communication, 2004, 7, 923-928.	3.9	13
60	Ion-specific interactions at calciteâ€“brine interfaces: a nano-scale study of the surface charge development and preferential binding of polar hydrocarbons. Physical Chemistry Chemical Physics, 2020, 22, 27999-28011.	2.8	13
61	Understanding the Swelling Behavior of Modified Nanoclay Filler Particles in Water and Ethanol. Journal of Physical Chemistry C, 2015, 119, 12625-12642.	3.1	12
62	Rhenium uptake and distribution in phaeophyceae macroalgae, Fucus vesiculosus. Royal Society Open Science, 2016, 3, 160161.	2.4	12
63	Changes in higher heating value and ash content of seaweed during ensiling. Journal of Applied Phycology, 2017, 29, 1037-1046.	2.8	12
64	A New Framework to Quantify the Wetting Behaviour of Carbonate Rock Surfaces Based on the Relationship between Zeta Potential and Contact Angle. Energies, 2020, 13, 993.	3.1	12
65	Ab Initio Transition State Searching in Complex Systems: Fatty Acid Decarboxylation in Minerals.. Journal of Physical Chemistry A, 2011, 115, 2658-2667.	2.5	11
66	Biofuels, science and society. Interface Focus, 2013, 3, 20120093.	3.0	10
67	Decoupling a novel Trichormus variabilis-Synechocystis sp. interaction to boost phycoremediation. Scientific Reports, 2019, 9, 2511.	3.3	10
68	A Deep Look into the Dynamics of Saltwater Imbibition in a Calcite Nanochannel: Temperature Impacts Capillarity Regimes. Langmuir, 2020, 36, 9035-9046.	3.5	10
69	Morphology and elastic modulus of novel poly[oligo(ethylene glycol) diacrylate]-montmorillonite nanocomposites. Journal of Polymer Science, Part B: Polymer Physics, 2005, 43, 1785-1793.	2.1	9
70	DFT+U investigation of the catalytic properties of ferruginous clay. American Mineralogist, 2013, 98, 132-140.	1.9	9
71	Peptide Formation on Layered Mineral Surfaces: The Key Role of Brucite-like Minerals on the Enhanced Formation of Alanine Dipeptides. ACS Earth and Space Chemistry, 2018, 2, 852-862.	2.7	9
72	Atomistic Insight into the Behavior of Ions at an Oil-Bearing Hydrated Calcite Surface: Implication to Ion-Engineered Waterflooding. Energy & Fuels, 2021, 35, 13039-13054.	5.1	9

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73	Translocation of isotopically distinct macroalgae: A route to low-cost biomonitoring?. Chemosphere, 2017, 184, 1175-1185.	8.2	8
74	Thermal Evolution of Natural Layered Double Hydroxides: Insight from Quintinite, Hydrotalcite, Stichtite, and Iowaite as Reference Samples for CO3- and Cl-Members of the Hydrotalcite Supergroup. Minerals (Basel, Switzerland), 2020, 10, 961.	2.0	8
75	Analytical solution for clay plug swelling experiments. Applied Clay Science, 2017, 149, 75-78.	5.2	7
76	Ketone Formation via Decarboxylation Reactions of Fatty Acids Using Solid Hydroxide/Oxide Catalysts. Inorganics, 2018, 6, 121.	2.7	7
77	Bioenergy production usingTrichormus variabilisâ€“ a review. Biofuels, Bioproducts and Biorefining, 2019, 13, 1365-1382.	3.7	7
78	Ultra-high aspect ratio hybrid materials: the role of organic guest and synthesis method. Dalton Transactions, 2018, 47, 2933-2938.	3.3	6
79	Adding Value to Waste Minerals in a Circular Economy Framework: Ochre-Derived Layered Double Hydroxide Catalysts in Fatty Acid Ketonisation. Minerals (Basel, Switzerland), 2019, 9, 681.	2.0	5
80	Chemical Force Microscopy Study on the Interactions of COOH Functional Groups with Kaolinite Surfaces: Implications for Enhanced Oil Recovery. Minerals (Basel, Switzerland), 2017, 7, 250.	2.0	4
81	Opening the Egg Box: NMR spectroscopic analysis of the interactions between s-block cations and kelp monosaccharides. Dalton Transactions, 2021, 50, 13246-13255.	3.3	3
82	Effect of Structural Fe Reduction on Water Sorption by Swelling and Non-Swelling Clay Minerals. Minerals (Basel, Switzerland), 2022, 12, 453.	2.0	3
83	Reduced to Hierarchy: Carbon Filament-Supported Mixed Metal Oxide Nanoparticles. ACS Omega, 2019, 4, 20230-20236.	3.5	2
84	DynDen: Assessing convergence of molecular dynamics simulations of interfaces. Computer Physics Communications, 2021, 269, 108126.	7.5	2
85	Solution-state behaviour of algal mono-uronates evaluated by pure shift and compressive sampling NMR techniques. Carbohydrate Research, 2020, 495, 108087.	2.3	1
86	Heterogeneous ketonic decarboxylation of dodecanoic acid: studying reaction parameters. RSC Advances, 2021, 11, 35575-35584.	3.6	1
87	Far- and mid-infrared examination of nontronite-1 clay mineral â€“ Redox and cation saturation effects. Applied Clay Science, 2022, 228, 106628.	5.2	1
88	Gaining Insight into the Structure and Dynamics of Clayâ€“Polymer Nanocomposite Systems Through Computer Simulation. , 2008, , 175-203.		0