Kulbir K Ghuman

List of Publications by Year
in descending order

33 papers	1,571 citations	471509 17 h-index	454955 30 g-index
33 all docs	33 docs citations	33 times ranked	2123 citing authors

#	Article	IF	Citations
1	Role of surface engineering of hybrid structure for high performance quantum dots based photoelectrochemical hydrogen generation. Chemical Engineering Journal, 2022, 429, 132425.	12.7	14
2	Molecular dynamics study of oxygen-ion diffusion in yttria-stabilized zirconia grain boundaries. Journal of Materials Chemistry A, 2022, 10, 2567-2579.	10.3	11
3	Disorder in energy materials and strategies to model it. Advances in Physics: X, 2021, 6, .	4.1	1
4	Shining light on CO₂: from materials discovery to photocatalyst, photoreactor and process engineering. Chemical Society Reviews, 2020, 49, 5648-5663.	38.1	91
5	Microstructural and Electronic Properties of the YSZ/CeO₂ Interface via Multiscale Modeling. Journal of Physical Chemistry C, 2020, 124, 15680-15687.	3.1	2
6	Interfacial Properties of Bilayer SOFC Electrolytes Via Scale Bridging Simulations. ECS Meeting Abstracts, 2020, MA2020-01, 1801-1801.	0.0	0
7	Tailoring widely used ammonia synthesis catalysts for H and N poisoning resistance. Physical Chemistry Chemical Physics, 2019, 21, 5117-5122.	2.8	13
8	Mechanistic insights into water adsorption and dissociation on amorphous TiO₂-based catalysts. Science and Technology of Advanced Materials, 2018, 19, 44-52.	6.1	25
9	Highly Efficient Ambient Temperature CO₂ Photomethanation Catalyzed by Nanostructured RuO₂ on Silicon Photonic Crystal Support. Advanced Energy Materials, 2018, 8, 1702277.	19.5	58
10	Solar Fuels: Highly Efficient Ambient Temperature CO₂ Photomethanation Catalyzed by Nanostructured RuO₂ on Silicon Photonic Crystal Support (Adv. Energy Mater. 9/2018). Advanced Energy Materials, 2018, 8, 1870041.	19.5	7
11	Tailoring Surface Frustrated Lewis Pairs of In₂O_{3âˆ’}_x(OH)_y for Gasâ€Phase Heterogeneous Photocatalytic Reduction of CO₂ by Isomorphous Substitution of In³⁺ with Bi³⁺. Advanced Science, 2018, 5, 1700732.	11.2	91
12	Enhanced photothermal reduction of gaseous CO₂ over silicon photonic crystal supported ruthenium at ambient temperature. Energy and Environmental Science, 2018, 11, 3443-3451.	30.8	83
13	Solar Fuels: Tailoring Surface Frustrated Lewis Pairs of In₂O_{3âˆ’}_x(OH)_y for Gasâ€Phase Heterogeneous Photocatalytic Reduction of CO₂ by Isomorphous Substitution of In³⁺ with Bi³⁺ (Adv. Sci. 6/2018). Advanced Science, 2018, 5, 1870034.	11.2	3
14	Electronic Structure of a Polybenzimidazole-Wrapped Single-Wall Carbon Nanotube. Journal of Physical Chemistry C, 2018, 122, 15979-15985.	3.1	7
15	Photothermal Catalyst Engineering: Hydrogenation of Gaseous CO₂ with High Activity and Tailored Selectivity. Advanced Science, 2017, 4, 1700252.	11.2	97
16	Photothermal Catalysis: Photothermal Catalyst Engineering: Hydrogenation of Gaseous CO₂ with High Activity and Tailored Selectivity (Adv. Sci. 10/2017). Advanced Science, 2017, 4, .	11.2	2
17	Self-Trapped Charge Carriers in Defected Amorphous TiO₂. Journal of Physical Chemistry C, 2016, 120, 27910-27916.	3.1	17
18	Carrier dynamics and the role of surface defects: Designing a photocatalyst for gas-phase CO ₂ reduction. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E8011-E8020.	7.1	89

#	Article	IF	Citations
19	Surface Analogues of Molecular Frustrated Lewis Pairs in Heterogeneous CO₂ Hydrogenation Catalysis. ACS Catalysis, 2016, 6, 5764-5770.	11.2	80
20	Metadynamics-Biased ab Initio Molecular Dynamics Study of Heterogeneous CO₂ Reduction via Surface Frustrated Lewis Pairs. ACS Catalysis, 2016, 6, 7109-7117.	11.2	78
21	Heterogeneous reduction of carbon dioxide by hydride-terminated silicon nanocrystals. Nature Communications, 2016, 7, 12553.	12.8	93
22	Photoexcited Surface Frustrated Lewis Pairs for Heterogeneous Photocatalytic CO₂ Reduction. Journal of the American Chemical Society, 2016, 138, 1206-1214.	13.7	210
23	Illuminating CO₂ reduction on frustrated Lewis pair surfaces: investigating the role of surface hydroxides and oxygen vacancies on nanocrystalline In₂O_{3â˜x}(OH)_y. Physical Chemistry Chemical Physics, 2015, 17, 14623-14635.	2.8	186
24	Adsorption and Dissociation of H₂O on Monolayered MoS₂ Edges: Energetics and Mechanism from ab Initio Simulations. Journal of Physical Chemistry C, 2015, 119, 6518-6529.	3.1	107
25	A DFT +Ustudy of (Rh, Nb)-codoped rutile TiO₂. Journal of Physics Condensed Matter, 2013, 25, 085501.	1.8	23
26	Vibrational density of states of TiO2 nanoparticles. Journal of Non-Crystalline Solids, 2013, 373-374, 28-33.	3.1	6
27	Effect of doping on electronic structure and photocatalytic behavior of amorphous TiO2. Journal of Physics Condensed Matter, 2013, 25, 475501.	1.8	30
28	Amorphous TiO2 as a Photocatalyst for Hydrogen Production: A DFT Study of Structural and Electronic Properties. Energy Procedia, 2012, 29, 291-299.	1.8	108
29	Structural properties of amorphous TiO2 nanoparticle: Molecular dynamics study. , 2011, , .		0
30	Structure factor of amorphous TiO2 nanoparticle; Molecular Dynamics Study. Journal of Non-Crystalline Solids, 2011, 357, 3399-3404.	3.1	19
31	Meyerâ€“Neldel DC conduction in chalcogenide glasses. Pramana - Journal of Physics, 2011, 76, 629-637.	1.8	6
32	Strained structure of differently prepared amorphous TiO₂ nanoparticle: Molecular dynamics study. Journal of Materials Research, 2011, 26, 2604-2611.	2.6	14
33	Static Structure Factor of Amorphous Rutile Nanoparticle: A Molecular Dynamics Study. , 2011, , .		0