

# Nirmal Kumar

## List of Publications by Year in descending order

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29  
papers

1,158  
citations

394286

19  
h-index

552653

26  
g-index

29  
all docs

29  
docs citations

29  
times ranked

1031  
citing authors

#	ARTICLE	IF	CITATIONS
1	High-Entropy Alloys as Catalysts for the CO <sub>2</sub> and CO Reduction Reactions: Experimental Realization. ACS Catalysis, 2020, 10, 3658-3663.	5.5	244
2	A perspective on the catalysis using the high entropy alloys. Nano Energy, 2021, 88, 106261.	8.2	87
3	Low-cost high entropy alloy (HEA) for high-efficiency oxygen evolution reaction (OER). Nano Research, 2022, 15, 4799-4806.	5.8	80
4	Nature-inspired materials: Emerging trends and prospects. NPG Asia Materials, 2021, 13, .	3.8	71
5	Cryomilling: An environment friendly approach of preparation large quantity ultra refined pure aluminium nanoparticles. Journal of Materials Research and Technology, 2019, 8, 63-74.	2.6	69
6	Low-Temperature CO Oxidation over Combustion Made Fe- and Cr-Doped Co <sub>3</sub> O <sub>4</sub> Catalysts: Role of Dopant's Nature toward Achieving Superior Catalytic Activity and Stability. Journal of Physical Chemistry C, 2017, 121, 15256-15265.	1.5	67
7	Preparation of nanocrystalline high-entropy alloys via cryomilling of cast ingots. Journal of Materials Science, 2018, 53, 13411-13423.	1.7	55
8	Electrooxidation of Hydrazine Utilizing High-Entropy Alloys: Assisting the Oxygen Evolution Reaction at the Thermodynamic Voltage. ACS Catalysis, 2021, 11, 14000-14007.	5.5	47
9	Industry 4.0 and Digitalisation in Healthcare. Materials, 2022, 15, 2140.	1.3	46
10	Multi-component (Ag-Au-Cu-Pd-Pt) alloy nanoparticle-decorated p-type 2D-molybdenum disulfide (MoS <sub>2</sub> ) for enhanced hydrogen sensing. Nanoscale, 2020, 12, 11830-11841.	2.8	42
11	Ultra-Low-Temperature CO Oxidation Activity of Octahedral Site Cobalt Species in Co <sub>3</sub> O <sub>4</sub> Based Catalysts: Unravelling the Origin of the Unique Catalytic Property. Journal of Physical Chemistry C, 2019, 123, 19557-19571.	1.5	41
12	Green synthesis of Ag nanoparticles in large quantity by cryomilling. RSC Advances, 2016, 6, 111380-111388.	1.7	40
13	Formic acid and methanol electro-oxidation and counter hydrogen production using nano high entropy catalyst. Materials Today Energy, 2020, 16, 100393.	2.5	38
14	Fabrication of novel cryomill for synthesis of high purity metallic nanoparticles. Review of Scientific Instruments, 2015, 86, 083903.	0.6	32
15	Cryomilling as environmentally friendly synthesis route to prepare nanomaterials. International Materials Reviews, 2021, 66, 493-532.	9.4	31
16	Effect of functional groups (methyl, phenyl) on organic-inorganic hybrid sol-gel silica coatings on surface modified SS 316. Ceramics International, 2012, 38, 6565-6572.	2.3	27
17	Potential pathway for recycling of the paper mill sludge compost for brick making. Construction and Building Materials, 2021, 278, 122384.	3.2	23
18	Effect of Al Addition on the Microstructural Evolution of Equiatomic CoCrFeMnNi Alloy. Transactions of the Indian Institute of Metals, 2018, 71, 2749-2758.	0.7	21

#	ARTICLE	IF	CITATIONS
19	Emergence of machine learning in the development of high entropy alloy and their prospects in advanced engineering applications. Emergent Materials, 2021, 4, 1635-1648.	3.2	21
20	Stabilization of a Highly Concentrated Colloidal Suspension of Pristine Metallic Nanoparticles. Langmuir, 2019, 35, 2668-2673.	1.6	20
21	Hollow Gold Nanoprism as Highly Efficient "Single" Nanotransducer for Surface-Enhanced Raman Scattering Applications. Journal of Physical Chemistry C, 2016, 120, 25548-25556.	1.5	16
22	Thermal Spray Coatings for Electromagnetic Wave Absorption and Interference Shielding: A Review and Future Challenges. Advanced Engineering Materials, 2022, 24, .	1.6	12
23	Role of thermal spray in combating climate change. Emergent Materials, 0, , 1.	3.2	9
24	Effect of Plasma Surface Pretreatment on Ce <sup>3+</sup> -Doped GPTMS-ZrO <sub>2</sub> Self-Healing Coatings on Aluminum Alloy. ISRN Corrosion, 2012, 2012, 1-9.	0.3	6
25	Large-scale manufacturing route to metamaterial coatings using thermal spray techniques and their response to solar radiation. Emergent Materials, 0, , 1.	3.2	5
26	Nanofabrication route to achieve sustainable production of next generation defect-free graphene: analysis and characterisation. Nanofabrication, 2021, 6, 36-43.	1.1	4
27	The Effect of Configurational Entropy of Mixing on the Design and Development of Novel Materials. Proceedings of the Indian National Science Academy, 2019, , .	0.5	3
28	Nanomaterials Based Biosensing: Methods and Principle of Detection. Materials Horizons, 2022, , 1-27.	0.3	1
29	Easy scalable avenue of anti-bacterial nanocomposites coating containing Ag NPs prepared by cryomilling. Materials Today Communications, 2021, 26, 102020.	0.9	0