

Shankar Muthukonda Venkatakrishnan

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94 papers	4,206 citations	33 h-index	64 g-index
97 ext. papers	5,017 ext. citations	6.2 avg, IF	6.01 L-index

#	Paper	IF	Citations
94	Solar photocatalytic degradation of azo dye: comparison of photocatalytic efficiency of ZnO and TiO ₂ . <i>Solar Energy Materials and Solar Cells</i> , 2003 , 77, 65-82	6.4	1205
93	Photocatalytic recovery of H ₂ from H ₂ S containing wastewater: Surface and interface control of photo-excitons in Cu ₂ S@TiO ₂ core-shell nanostructures. <i>Applied Catalysis B: Environmental</i> , 2019 , 254, 174-185	21.8	167
92	Influence of electron storing, transferring and shuttling assets of reduced graphene oxide at the interfacial copper doped TiO ₂ p-n heterojunction for increased hydrogen production. <i>Nanoscale</i> , 2015 , 7, 7849-57	7.7	163
91	A review on frontiers in plasmonic nano-photocatalysts for hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2019 , 44, 10453-10472	6.7	148
90	Metal-organic frameworks (MOFs)-based efficient heterogeneous photocatalysts: Synthesis, properties and its applications in photocatalytic hydrogen generation, CO ₂ reduction and photodegradation of organic dyes. <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 7656-7679	6.7	132
89	Efficient Electron Transfer across a ZnO-MoS ₂ -Reduced Graphene Oxide Heterojunction for Enhanced Sunlight-Driven Photocatalytic Hydrogen Evolution. <i>ChemSusChem</i> , 2017 , 10, 3588-3603	8.3	126
88	Cu ₂ O-sensitized TiO ₂ nanorods with nanocavities for highly efficient photocatalytic hydrogen production under solar irradiation. <i>Solar Energy Materials and Solar Cells</i> , 2015 , 136, 157-166	6.4	107
87	Construction of ternary hybrid layered reduced graphene oxide supported g-C ₃ N ₄ -TiO ₂ nanocomposite and its photocatalytic hydrogen production activity. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 3892-3904	6.7	96
86	Two dimensional N-doped ZnO-graphitic carbon nitride nanosheets heterojunctions with enhanced photocatalytic hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 3988-4002	6.7	95
85	Enhanced photocatalytic activity for the destruction of monocrotophos pesticide by TiO ₂ /H ₂ O ₂ . <i>Journal of Molecular Catalysis A</i> , 2004 , 223, 195-200		92
84	Multifunctional Cu/Ag quantum dots on TiO ₂ nanotubes as highly efficient photocatalysts for enhanced solar hydrogen evolution. <i>Journal of Catalysis</i> , 2017 , 350, 226-239	7.3	87
83	Highly efficient solar light-driven photocatalytic hydrogen production over Cu/FCNTs-titania quantum dots-based heterostructures. <i>Journal of Environmental Management</i> , 2020 , 254, 109747	7.9	86
82	Sustainable hydrogen production for the greener environment by quantum dots-based efficient photocatalysts: A review. <i>Journal of Environmental Management</i> , 2019 , 248, 109246	7.9	80
81	Solar light sensitized p-Ag ₂ O/n-TiO ₂ nanotubes heterojunction photocatalysts for enhanced hydrogen production in aqueous-glycerol solution. <i>Solar Energy Materials and Solar Cells</i> , 2016 , 154, 78-87	6.4	77
80	Nanostructured Bi ₂ O ₃ @TiO ₂ photocatalyst for enhanced hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2017 , 42, 6627-6636	6.7	71
79	Stable and active Cu _x O/TiO ₂ nanostructured catalyst for proficient hydrogen production under solar light irradiation. <i>Solar Energy Materials and Solar Cells</i> , 2016 , 146, 63-71	6.4	67
78	Nanostructured semiconducting materials for efficient hydrogen generation. <i>Environmental Chemistry Letters</i> , 2018 , 16, 765-796	13.3	64

77	Defect-Rich MoS ₂ Ultrathin Nanosheets-Coated Nitrogen-Doped ZnO Nanorod Heterostructures: An Insight into in-Situ-Generated ZnS for Enhanced Photocatalytic Hydrogen Evolution. <i>ACS Applied Energy Materials</i> , 2019 , 2, 5622-5634	6.1	62
76	The facile hydrothermal synthesis of CuO@ZnO heterojunction nanostructures for enhanced photocatalytic hydrogen evolution. <i>New Journal of Chemistry</i> , 2019 , 43, 6794-6805	3.6	55
75	Shape dependence structural, optical and photocatalytic properties of TiO ₂ nanocrystals for enhanced hydrogen production via glycerol reforming. <i>Solar Energy Materials and Solar Cells</i> , 2017 , 163, 113-119	6.4	54
74	CuO Quantum Dots Decorated TiO ₂ Nanocomposite Photocatalyst for Stable Hydrogen Generation. <i>Industrial & Engineering Chemistry Research</i> , 2018 , 57, 568-577	3.9	51
73	Photocatalytic Reforming of Biomass Derived Crude Glycerol in Water: A Sustainable Approach for Improved Hydrogen Generation Using Ni(OH) ₂ Decorated TiO ₂ Nanotubes under Solar Light Irradiation. <i>ACS Sustainable Chemistry and Engineering</i> , 2018 , 6, 3754-3764	8.3	48
72	Nanohybrid of titania/carbon nanotubes/nanohorns: A promising photocatalyst for enhanced hydrogen production under solar irradiation. <i>International Journal of Hydrogen Energy</i> , 2015 , 40, 1665-1674	6.7	48
71	Novel thin-film reactor for photocatalytic degradation of pesticides in an aqueous solution. <i>Journal of Chemical Technology and Biotechnology</i> , 2004 , 79, 1279-1285	3.5	48
70	Interplay between Mesocrystals of CaTiO ₃ and Edge Sulfur Atom Enriched MoS ₂ on Reduced Graphene Oxide Nanosheets: Enhanced Photocatalytic Performance under Sunlight Irradiation. <i>ChemPhotoChem</i> , 2020 , 4, 427-444	3.3	47
69	Photocatalytic degradation of reactive yellow 17 dye in aqueous solution in the presence of TiO ₂ with cement binder. <i>International Journal of Photoenergy</i> , 2003 , 5, 45-49	2.1	47
68	Functionalized titanate nanotube/polyetherimide nanocomposite membrane for improved salt rejection under low pressure nanofiltration. <i>RSC Advances</i> , 2015 , 5, 39464-39473	3.7	38
67	Synergistic effect of nanocavities in anatase TiO ₂ nanobelts for photocatalytic degradation of methyl orange dye in aqueous solution. <i>Journal of Colloid and Interface Science</i> , 2016 , 477, 201-8	9.3	37
66	Enhanced photocatalytic hydrogen production activity of noble metal free MWCNT-TiO ₂ nanocomposites. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 4036-4043	6.7	36
65	CuO@NiO core-shell nanoparticles decorated anatase TiO ₂ nanospheres for enhanced photocatalytic hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 7517-7529	6.7	36
64	Effective shuttling of photoexcitons on CdS/NiO core/shell photocatalysts for enhanced photocatalytic hydrogen production. <i>Materials Research Bulletin</i> , 2018 , 101, 223-231	5.1	35
63	CuO Cr ₂ O ₃ core-shell structured co-catalysts on TiO ₂ for efficient photocatalytic water splitting using direct solar light. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 3976-3987	6.7	35
62	One-pot synthesis of Cu/TiO ₂ /CuO nanocomposite: Application to photocatalysis for enhanced H ₂ production, dye degradation & detoxification of Cr (VI). <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 7813-7828	6.7	34
61	High potential and robust ternary LaFeO ₃ /CdS/carbon quantum dots nanocomposite for photocatalytic H ₂ evolution under sunlight illumination. <i>Journal of Colloid and Interface Science</i> , 2021 , 583, 255-266	9.3	32
60	Pt/TiO ₂ nanotube photocatalyst - Effect of synthesis methods on valence state of Pt and its influence on hydrogen production and dye degradation. <i>Journal of Colloid and Interface Science</i> , 2019 , 538, 83-98	9.3	30

59	Synthesis of titania wrapped cadmium sulfide nanorods for photocatalytic hydrogen generation. <i>Materials Research Bulletin</i> , 2018 , 103, 122-132	5.1	29
58	Unraveling the structural and morphological stability of oxygen vacancy engineered leaf-templated CaTiO ₃ towards photocatalytic H ₂ evolution and N ₂ fixation reactions. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 17006-17018	13	27
57	Rapid synthesis of alkylaminophenols via the Petasis boronoMannich reaction using protonated trititanate nanotubes as robust solid-acid catalysts. <i>RSC Advances</i> , 2016 , 6, 14682-14691	3.7	26
56	Development of high quantum efficiency CdS/ZnS core/shell structured photocatalyst for the enhanced solar hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 22315-22328	6.7	26
55	Fabrication of a novel ZnInS/g-CN/graphene ternary nanocomposite with enhanced charge separation for efficient photocatalytic H ₂ evolution under solar light illumination. <i>Photochemical and Photobiological Sciences</i> , 2019 , 18, 2952-2964	4.2	25
54	Decoration of Graphene Quantum Dots on TiO ₂ Nanostructures: Photosensitizer and Cocatalyst Role for Enhanced Hydrogen Generation. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 13060-13068	3.0	24
53	Facile synthesis of noble-metal free polygonal Zn ₂ TiO ₄ nanostructures for highly efficient photocatalytic hydrogen evolution under solar light irradiation. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 13145-13157	6.7	24
52	Three-Dimensional Carbonaceous Aerogels Embedded with Rh-SrTiO ₃ for Enhanced Hydrogen Evolution Triggered by Efficient Charge Transfer and Light Absorption. <i>ACS Applied Energy Materials</i> , 2020 , 3, 12134-12147	6.1	22
51	Synergetic improvement in charge carrier transport and light harvesting over ternary InVO ₄ -g-C ₃ N ₄ /rGO hybrid nanocomposite for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 7530-7540	6.7	22
50	Optimization of N doping in TiO nanotubes for the enhanced solar light mediated photocatalytic H ₂ production and dye degradation. <i>Environmental Pollution</i> , 2021 , 269, 116170	9.3	22
49	Dual role of a g-C ₃ N ₄ /carbon intra-Schottky junction in charge carrier generation and separation for efficient solar H ₂ production. <i>Catalysis Science and Technology</i> , 2019 , 9, 3493-3503	5.5	19
48	Highly Efficient Hydrogen Production using Bi ₂ O ₃ /TiO ₂ Nanostructured Photocatalysts Under Led Light Irradiation. <i>Materials Today: Proceedings</i> , 2016 , 3, 1351-1358	1.4	18
47	Tetrathiafulvalene Scaffold-Based Sensitizer on Hierarchical Porous TiO ₂ : Efficient Light-Harvesting Material for Hydrogen Production. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 70-81	3.8	18
46	Sea urchin shaped ZnO coupled with MoS ₂ and polyaniline as highly efficient photocatalysts for organic pollutant decomposition and hydrogen evolution. <i>Ceramics International</i> , 2021 , 47, 10301-10313	5.1	17
45	Solar-Light Harvesting Bimetallic Ag/Au Decorated Graphene Plasmonic System with Efficient Photoelectrochemical Performance for the Enhanced Water Reduction Process. <i>ACS Applied Nano Materials</i> , 2019 , 2, 4782-4792	5.6	16
44	Enhancement of biological hydrogen production using green alga <i>Chlorococcum minutum</i> . <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 3957-3966	6.7	15
43	Monodispersed core/shell nanospheres of ZnS/NiO with enhanced H ₂ generation and quantum efficiency at versatile photocatalytic conditions. <i>Journal of Hazardous Materials</i> , 2021 , 413, 125359	12.8	14
42	Multiwalled carbon nanotubes in titania based nanocomposite as trap for photoexcitons for enhanced photocatalytic hydrogen production under solar light irradiation. <i>Materials Research Bulletin</i> , 2018 , 106, 271-275	5.1	13

41	Protonated trititanate nanotubes: an efficient catalyst for one-pot three-component coupling of benzothiazole amines, heterocyclic aldehydes, and dialkyl/diaryl phosphites with a greener perspective. <i>Tetrahedron Letters</i> , 2016 , 57, 696-702	2	12
40	Inorganic alkaline-sols as precursors for rapid synthesis of ETS-10 microporous titanasilicates and their photocatalytic reforming of methanol under visible-light irradiation. <i>Catalysis Communications</i> , 2009 , 11, 261-265	3.2	12
39	Photocatalytic hydrogen production from dye contaminated water and electrochemical supercapacitors using carbon nanohorns and TiO ₂ nanoflower heterogeneous catalysts. <i>Journal of Environmental Management</i> , 2021 , 277, 111433	7.9	12
38	Effective excitons separation on graphene supported ZrO ₂ /TiO ₂ heterojunction for enhanced H ₂ production under solar light. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 3905-3919	6.7	11
37	Photocatalytic hydrogen production by ternary heterojunction composites of silver nanoparticles doped FCNT-TiO ₂ . <i>Journal of Environmental Management</i> , 2021 , 286, 112130	7.9	11
36	Retorting Photocorrosion and Enhanced Charge Carrier Separation at CdSe Nanocapsules by Chemically Synthesized TiO ₂ Shell for Photocatalytic Hydrogen Fuel Generation. <i>ChemCatChem</i> , 2020 , 12, 3139-3152	5.2	10
35	Light-driven transformation of biomass into chemicals using photocatalysts - Vistas and challenges. <i>Journal of Environmental Management</i> , 2021 , 284, 111983	7.9	10
34	Metal chalcogenide-based core/shell photocatalysts for solar hydrogen production: Recent advances, properties and technology challenges. <i>Journal of Hazardous Materials</i> , 2021 , 415, 125588	12.8	10
33	Co-catalyst free Titanate Nanorods for improved Hydrogen production under solar light irradiation. <i>Journal of Chemical Sciences</i> , 2016 , 128, 649-656	1.8	9
32	Trititanate Nanotubes as highly efficient adsorbent for fluoride removal from water: Adsorption performance and uptake mechanism. <i>Journal of Environmental Chemical Engineering</i> , 2016 , 4, 4754-4768	6.8	8
31	Heterojunction of CdS Nanocapsules/WO ₃ Nanosheets Composite as a Stable and Efficient Photocatalyst for Hydrogen Evolution. <i>Energy & Fuels</i> , 2020 , 34, 14598-14610	4.1	7
30	Manifestation of enhanced and durable photocatalytic H ₂ production using hierarchically structured Pt@Co ₃ O ₄ /TiO ₂ ternary nanocomposite. <i>Ceramics International</i> , 2021 , 47, 10226-10235	5.1	7
29	Solar hydrogen generation from organic substance using earth abundant Cu ₂ S/NiO heterojunction semiconductor photocatalyst. <i>Ceramics International</i> , 2021 , 47, 10206-10215	5.1	7
28	A co-catalyst free, eco-friendly, novel visible light absorbing iron based complex oxide nanocomposites for enhanced photocatalytic hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 14417-14426	6.7	7
27	Influence of pre-oxidation, versus post-oxidation of carbon nanohorns in TiO ₂ nanohybrid for enhanced photocatalytic hydrogen production. <i>Materials Research Bulletin</i> , 2019 , 109, 34-40	5.1	6
26	Gram-scale synthesis of ZnS/NiO core-shell hierarchical nanostructures and their enhanced H ₂ production in crude glycerol and sulphide wastewater. <i>Environmental Research</i> , 2021 , 199, 111323	7.9	6
25	Significantly enhanced cocatalyst-free H ₂ evolution from defect-engineered Brown TiO ₂ . <i>Ceramics International</i> , 2021 , 47, 14821-14828	5.1	5
24	Inclusion of low cost activated carbon for improving hydrogen production performance of TiO ₂ nanoparticles under natural solar light irradiation. <i>Ceramics International</i> , 2021 , 47, 10216-10225	5.1	5

23	Synthesis of Ag ₃ TiO ₂ Nanoparticles for Improved Photocatalytic Hydrogen Production Under Solar Light Irradiation. <i>Advanced Porous Materials</i> , 2017 , 5, 122-127		4
22	Preparation of CuO/TiO ₂ Solar Light Harvesting Nanotubular Catalysts for Proficient Hydrogen Production Using Aqueous-Glycerol Solution. <i>Energy and Environment Focus</i> , 2015 , 4, 214-220		4
21	Sonochemical assisted impregnation of Bi ₂ WO ₆ on TiO ₂ nanorod to form Z-scheme heterojunction for enhanced photocatalytic H ₂ production. <i>Advanced Powder Technology</i> , 2021 , 32, 4734-4734	4.6	4
20	Surfactant controlled metal oxide shell layer deposition for enhanced photocatalytic solar hydrogen generation: CdSe/TiO ₂ nanocomposite a case study. <i>Materials Letters</i> , 2021 , 298, 130025	3.3	4
19	Graphitic carbon nitrideBased nanocomposite materials for photocatalytic hydrogen generation 2020 , 293-324		3
18	Cocatalyst free nickel sulphide nanostructure for enhanced photocatalytic hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2022 , 47, 5307-5318	6.7	3
17	Binary metal oxides incorporated polyethersulfone ultrafiltration mixed matrix membranes for the pretreatment of seawater desalination. <i>Journal of Applied Polymer Science</i> , 2021 , 138, 49883	2.9	3
16	Influence of reaction parameters for the enhanced photocatalytic hydrogen production using surface modified semiconductor Titania nanotubes. <i>Materials Today: Proceedings</i> , 2017 , 4, 11653-11659	1.4	2
15	Solvothermal fusion of Ag- and N-doped LiTaO ₃ perovskite nanospheres for improved photocatalytic hydrogen production. <i>Applied Organometallic Chemistry</i> , 2021 , 35, e6207	3.1	2
14	Utilizing 2D materials to enhance H ₂ generation efficiency via photocatalytic reforming industrial and solid waste. <i>Environmental Research</i> , 2021 , 200, 111239	7.9	2
13	Heterojunction engineering at ternary Cu ₂ S/Ta ₂ O ₅ /CdS nanocomposite for enhanced visible light-driven photocatalytic hydrogen evolution. <i>Materials Today Energy</i> , 2021 , 21, 100779	7	2
12	Solar light active CuO/TiO ₂ nanobelt photocatalyst for enhanced H ₂ production 2013 ,		1
11	Green-Chemical Synthesis of ETS-4 Zeotypes for Photocatalytic Hydrogen Production. <i>Advanced Materials Research</i> , 2012 , 584, 366-370	0.5	1
10	Enhanced photocatalytic degradation of monocrotophos in aqueous solution over titania hybridised with beta-zeolite. <i>Annali Di Chimica</i> , 2003 , 93, 827-32		1
9	Temperature-Driven Morphology Control on CdSe Nanofractals and Its Influence over the Augmented Rate of H ₂ Evolution: Charge Separation via the S-Scheme Mechanism with Incorporated Cu ₃ P. <i>ACS Applied Energy Materials</i> , 2021 , 4, 13983-13996	6.1	1
8	Emerging trends in photocatalytic transformation of biomass-derived glycerol into hydrogen fuel and value-added chemicals 2020 , 227-246		0
7	Solar-light responsive efficient H ₂ evolution using a novel ternary hierarchical SrTiO ₃ /CdS/carbon nanospheres photocatalytic system. <i>Journal of Nanostructure in Chemistry</i> ,1	7.6	0
6	Metal organic framework-based photocatalysts for hydrogen production 2021 , 275-295		0

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- 4 Highly Stable Metal Oxide-Based Heterostructured Photocatalysts for an Efficient Photocatalytic Hydrogen Production. *Environmental Chemistry for A Sustainable World*, **2019**, 17-40 o.8
- 3 Oxides free nanomaterials for (photo)electrochemical water splitting **2022**, 369-408
- 2 Nanostructured Heterojunction (1D-0D and 2D-0D) Photocatalysts for Environmental Remediation **2021**, 33-63
- 1 Nanostructures in Photocatalysis: Opportunities and Challenges for Environmental Applications **2021**, 1-32