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MoS<sub>2</sub>/graphene cocatalyst for efficient photocatalytic H<sub>2</sub> evolution under visible light irradiation

DOI: 10.1021/nn5019945  
ACS Nano, 2014, 8, 7078-87.

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**Version:** 2024-04-25

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841	Synergistic effect of graphene as a co-catalyst for enhanced daylight-induced photocatalytic activity of Zn <sub>0.5</sub> Cd <sub>0.5</sub> S synthesized via an improved one-pot co-precipitation-hydrothermal strategy. <b>2014</b> , 4, 59676-59685		57
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839	Catalyzing the Hydrogen Evolution Reaction (HER) with Molybdenum Sulfide Nanomaterials. <b>2014</b> , 4, 3957-3971		1086
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697	Few-layered MoS <sub>2</sub> nanosheets wrapped ultrafine TiO <sub>2</sub> nanobelts with enhanced photocatalytic property. <b>2016</b> , 8, 6101-9	114
696	Two-dimensional layered MoS <sub>2</sub> : rational design, properties and electrochemical applications. <b>2016</b> , 9, 1190-1209	432
695	Core-shell structured CeO <sub>2</sub> @MoS <sub>2</sub> nanocomposites for high performance symmetric supercapacitors. <b>2016</b> , 18, 4158-4164	36
694	Rational design of semiconductor-based photocatalysts for advanced photocatalytic hydrogen production: the case of cadmium chalcogenides. <b>2016</b> , 3, 591-615	119
693	MoS <sub>2</sub> -graphene/ZnIn <sub>2</sub> S <sub>4</sub> hierarchical microarchitectures with an electron transport bridge between light-harvesting semiconductor and cocatalyst: A highly efficient photocatalyst for solar hydrogen generation. <b>2016</b> , 188, 13-22	188
692	Photocatalytic production of hydrogen from biomass-derived feedstocks. <b>2016</b> , 315, 1-66	238
691	A sensitive electrochemiluminescent immunosensor based on 3D-flower-like MoS <sub>2</sub> microspheres and using AuPt nanoparticles for signal amplification. <b>2016</b> , 6, 23411-23419	9
690	Dual synergetic effects in MoS <sub>2</sub> /pyridine-modified g-C <sub>3</sub> N <sub>4</sub> composite for highly active and stable photocatalytic hydrogen evolution under visible light. <b>2016</b> , 190, 36-43	108
689	Hierarchical photocatalysts. <b>2016</b> , 45, 2603-36	1216
688	TiO <sub>2</sub> @Carbon Photocatalysts: The Effect of Carbon Thickness on Catalysis. <b>2016</b> , 8, 1903-12	87
687	Omnidirectional enhancement of photocatalytic hydrogen evolution over hierarchical Eucalyptus leaf-like nanoarchitectures. <b>2016</b> , 186, 88-96	104
686	Water Splitting By Photocatalytic Reduction. <b>2016</b> , 175-210	1

685	Heterogeneous Photocatalysis. <b>2016</b> ,	42
684	Activating and optimizing MoS <sub>2</sub> basal planes for hydrogen evolution through the formation of strained sulphur vacancies. <b>2016</b> , 15, 48-53	1563
683	A general method for the synthesis of graphene oxide-metal sulfide composites with improved photocatalytic activities. <b>2016</b> , 125, 142-150	20
682	Graphene/CdS nanocomposite inactivation performance toward Escherichia coli in the presence of humic acid under visible light irradiation. <b>2016</b> , 284, 41-53	62
681	Biomolecule-assisted self-assembly of CdS/MoS <sub>2</sub> /graphene hollow spheres as high-efficiency photocatalysts for hydrogen evolution without noble metals. <b>2016</b> , 182, 504-512	145
680	Stabilizing and Improving Solar H <sub>2</sub> Generation from Zn(0.5)Cd(0.5)S Nanorods@MoS <sub>2</sub> /RGO Hybrids via Dual Charge Transfer Pathway. <b>2016</b> , 8, 2928-34	83
679	A MoS <sub>2</sub> /6,13-pentacenequinone composite catalyst for visible-light-induced hydrogen evolution in water. <b>2016</b> , 181, 16-23	43
678	Structure effect of graphene on the photocatalytic performance of plasmonic Ag/Ag <sub>2</sub> CO <sub>3</sub> -rGO for photocatalytic elimination of pollutants. <b>2016</b> , 181, 71-78	190
677	Carbon dots decorated graphitic carbon nitride as an efficient metal-free photocatalyst for phenol degradation. <b>2016</b> , 180, 656-662	260
676	Noble-metal-free MoS nanosheet modified-InVO heterostructures for enhanced visible-light-driven photocatalytic H <sub>2</sub> production. <b>2017</b> , 46, 2072-2076	25
675	Co S /MoS Yolk-Shell Spheres for Advanced Li/Na Storage. <b>2017</b> , 13, 1603490	127
674	Synthesis of ferroelectric KNbO <sub>3</sub> nanosheets by liquid exfoliation of layered perovskite K <sub>2</sub> NbO <sub>3</sub> F. <b>2017</b> , 698, 357-363	7
673	Highly efficient electrocatalytic oxidation of nitrite by electrodeposition of Au nanoparticles on molybdenum sulfide and multi-walled carbon nanotubes. <b>2017</b> , 786, 43-49	26
672	Insights into photo-activated electrode for boosting electrocatalytic methanol oxidation based on ultrathin MoS <sub>2</sub> nanosheets enwrapped CdS nanowires. <b>2017</b> , 42, 5006-5015	38
671	Effects of sacrificial reagents on photocatalytic hydrogen evolution over different photocatalysts. <b>2017</b> , 52, 5155-5164	101
670	Cobalt Phosphide Modified Titanium Oxide Nanophotocatalysts with Significantly Enhanced Photocatalytic Hydrogen Evolution from Water Splitting. <b>2017</b> , 13, 1603301	93
669	Hexagonal Zn <sub>1-x</sub> Cd <sub>x</sub> S (0.2 ≤ x ≤ 1) solid solution photocatalysts for H <sub>2</sub> generation from water. <b>2017</b> , 7, 982-987	38
668	Fabrication of WO <sub>3</sub> /RGO nano-composites for enhanced photocatalysis. <b>2017</b> , 7, 2606-2614	22

667	Hierarchical yolk-shell layered potassium niobate for tuned pH-dependent photocatalytic H <sub>2</sub> evolution. <b>2017</b> , 7, 1000-1005	24
666	Controlled Molybdenum Disulfide Assembly inside Carbon Nanofiber by Boudouard Reaction Inspired Selective Carbon Oxidation. <b>2017</b> , 29, 1605327	11
665	Construction and enhanced photocatalytic activities of a hydrogenated TiO <sub>2</sub> nanobelt coated with CDs/MoS <sub>2</sub> nanosheets. <b>2017</b> , 7, 8429-8442	27
664	Confinement effect of monolayer MoS quantum dots on conjugated polyimide and promotion of solar-driven photocatalytic hydrogen generation. <b>2017</b> , 46, 3877-3886	50
663	Photocatalytic degradation effect of malachite green and catalytic hydrogenation by UV-illuminated CeO/CdO multilayered nanoplatelet arrays: Investigation of antifungal and antimicrobial activities. <b>2017</b> , 169, 110-123	136
662	Multi-node CdS hetero-nanowires grown with defect-rich oxygen-doped MoS <sub>2</sub> ultrathin nanosheets for efficient visible-light photocatalytic H <sub>2</sub> evolution. <b>2017</b> , 10, 1377-1392	85
661	High activity of hot electrons from bulk 3D graphene materials for efficient photocatalytic hydrogen production. <b>2017</b> , 10, 1662-1672	38
660	Shape-Controllable Gold Nanoparticle-MoS Hybrids Prepared by Tuning Edge-Active Sites and Surface Structures of MoS via Temporally Shaped Femtosecond Pulses. <b>2017</b> , 9, 7447-7455	40
659	Fullerene (C <sub>60</sub> )/CdS nanocomposite with enhanced photocatalytic activity and stability. <b>2017</b> , 403, 151-158	66
658	Design and fabrication of functional hybrid materials for catalytic applications. <b>2017</b> , 4, 16-22	15
657	Double 2-dimensional H <sub>2</sub> -evolving catalyst tipped photocatalyst nanowires: A new avenue for high-efficiency solar to H <sub>2</sub> generation. <b>2017</b> , 34, 481-490	38
656	Three-dimensional photocatalysts with a network structure. <b>2017</b> , 5, 5661-5679	70
655	Multiscale structural and electronic control of molybdenum disulfide foam for highly efficient hydrogen production. <b>2017</b> , 8, 14430	378
654	Photocatalytic Properties of MoS <sub>2</sub> /CdS Composites Prepared Via One-Pot Hydrothermal Synthesis in Hydrogen Evolution Reactions from Aqueous Solutions of Organic Acids. <b>2017</b> , 53, 25-30	1
653	1T-Phase MoS <sub>2</sub> Nanosheets on TiO <sub>2</sub> Nanorod Arrays: 3D Photoanode with Extraordinary Catalytic Performance. <b>2017</b> , 5, 5175-5182	85
652	In-situ photochemical fabrication of transition metal-promoted amorphous molybdenum sulfide catalysts for enhanced photosensitized hydrogen evolution. <b>2017</b> , 42, 11118-11129	31
651	Progress in Controllable Construction and Energy-Related Applications of MX <sub>2</sub> /Graphene and MX <sub>2</sub> /MX <sub>2</sub> Heterostructures. <b>2017</b> , 3, 340-351	4
650	CO <sub>2</sub> -Induced Defect Engineering: A New Protocol by Doping Vacancies in 2D Heterostructures for Enhanced Visible-Light Photocatalysis. <b>2017</b> , 419, 573-579	17

649	Utilization of MoS <sub>2</sub> and graphene to enhance the photocatalytic activity of Cu <sub>2</sub> O for oxidative C C bond formation. <b>2017</b> , 213, 1-8	40
648	Bismuth sulphide-modified molybdenum disulphide as an efficient photocatalyst for hydrogen production under simulated solar light. <b>2017</b> , 98, 66-70	16
647	A novel architecture of dandelion-like Mo <sub>2</sub> C/TiO <sub>2</sub> heterojunction photocatalysts towards high-performance photocatalytic hydrogen production from water splitting. <b>2017</b> , 5, 10591-10598	83
646	MoS <sub>2</sub> -coated microspheres of self-sensitized carbon nitride for efficient photocatalytic hydrogen generation under visible light irradiation. <b>2017</b> , 396, 1808-1815	63
645	A three-dimensional BiOBr/RGO heterostructural aerogel with enhanced and selective photocatalytic properties under visible light. <b>2017</b> , 396, 1775-1782	63
644	Inorganic semiconductors-graphene composites in photo(electro)catalysis: Synthetic strategies, interaction mechanisms and applications. <b>2017</b> , 33, 132-164	43
643	2D materials-based photoelectrochemical cells: Combination of transition metal dichalcogenides and reduced graphene oxide for efficient charge transfer. <b>2017</b> , 4, 54-60	16
642	Integrating metallic nanoparticles of Au and Pt with MoS <sub>2</sub> /CdS hybrids for high-efficient photocatalytic hydrogen generation via plasmon-induced electron and energy transfer. <b>2017</b> , 7, 26097-26103	22
641	Ultrasensitive NO <sub>2</sub> gas sensing based on rGO/MoS <sub>2</sub> nanocomposite film at low temperature. <b>2017</b> , 251, 280-290	141
640	Cd <sub>3</sub> (C <sub>3</sub> N <sub>3</sub> S <sub>3</sub> ) <sub>2</sub> coordination polymer/graphene nanoarchitectures for enhanced photocatalytic H <sub>2</sub> O <sub>2</sub> production under visible light. <b>2017</b> , 62, 610-618	37
639	Reduced graphene oxide as an efficient support for CdS-MoS <sub>2</sub> heterostructures for enhanced photocatalytic H <sub>2</sub> evolution. <b>2017</b> , 42, 16449-16458	47
638	Improving Photocatalytic Performance from BiWO <sub>4</sub> @MoS <sub>2</sub> /graphene Hybrids via Gradual Charge Transferred Pathway. <b>2017</b> , 7, 3637	42
637	Remarkable enhancement in solar hydrogen generation from MoS <sub>2</sub> -RGO/ZnO composite photocatalyst by constructing a robust electron transport pathway. <b>2017</b> , 327, 397-405	60
636	Spatial charge separation of one-dimensional Ni <sub>2</sub> P-Cd <sub>0.9</sub> Zn <sub>0.1</sub> S/g-C <sub>3</sub> N <sub>4</sub> heterostructure for high-quantum-yield photocatalytic hydrogen production. <b>2017</b> , 217, 551-559	93
635	Efficient visible-light photocatalytic and enhanced photocorrosion inhibition of Ag <sub>2</sub> WO <sub>4</sub> decorated MoS <sub>2</sub> nanosheets. <b>2017</b> , 110, 266-273	32
634	Electrocatalysis of polysulfide conversion by sulfur-deficient MoS <sub>2</sub> nanoflakes for lithium-sulfur batteries. <b>2017</b> , 10, 1476-1486	617
633	An efficient photocatalytic system containing Eosin Y, 3D mesoporous graphene assembly and CuO for visible-light-driven H <sub>2</sub> evolution from water. <b>2017</b> , 42, 15540-15550	15
632	Layer Stacked Iodine and Phosphorus Co-doped C <sub>3</sub> N <sub>4</sub> for Enhanced Visible-Light Photocatalytic Hydrogen Evolution. <b>2017</b> , 9, 4083-4089	31

631	One-pot Synthesis of CdS Irregular Nanospheres Hybridized with Oxygen-Incorporated Defect-Rich MoS Ultrathin Nanosheets for Efficient Photocatalytic Hydrogen Evolution. <b>2017</b> , 9, 23635-23646	151
630	A series of bismuth-oxychloride/bismuth-oxiodide/graphene-oxide nanocomposites: Synthesis, characterization, and photocatalytic activity and mechanism. <b>2017</b> , 432, 196-209	82
629	Hybrid triazine-based graphitic carbon nitride and molybdenum disulfide bilayer with and without Li/Mg intercalation: Structural, electronic and optical properties. <b>2017</b> , 134, 84-92	8
628	Synthesis of flower-like molybdenum sulfide/graphene hybrid as an efficient oxygen reduction electrocatalyst for anion exchange membrane fuel cells. <b>2017</b> , 353, 104-114	20
627	The synthesis of hierarchical nanostructured MoS <sub>2</sub> /Graphene composites with enhanced visible-light photo-degradation property. <b>2017</b> , 412, 207-213	53
626	Emerging two-dimensional nanomaterials for electrochemical hydrogen evolution. <b>2017</b> , 5, 8187-8208	187
625	Edge dominated electronic properties of MoS <sub>2</sub> /graphene hybrid 2D materials: edge state, electron coupling and work function. <b>2017</b> , 5, 4845-4851	24
624	Roles of Two-Dimensional Transition Metal Dichalcogenides as Cocatalysts in Photocatalytic Hydrogen Evolution and Environmental Remediation. <b>2017</b> , 56, 4611-4626	77
623	Room-temperature synthesis of Cu <sub>x</sub> S (x = 1 or 2) co-modified TiO <sub>2</sub> nanocomposite and its highly efficient photocatalytic H <sub>2</sub> production activity. <b>2017</b> , 709, 422-430	14
622	Enhanced photogenerated carrier separation in CdS quantum dot sensitized ZnFeO/ZnInS nanosheet stereoscopic films for exceptional visible light photocatalytic H <sub>2</sub> evolution performance. <b>2017</b> , 9, 5912-5921	58
621	Synthesis of MoS <sub>2</sub> /graphene hybrid supported Au and Ag nanoparticles with multi-functional catalytic properties. <b>2017</b> , 28, 205603	13
620	Noble metal-free MoS <sub>2</sub> modified Mn <sub>0.25</sub> Cd <sub>0.75</sub> S for highly efficient visible-light driven photocatalytic H <sub>2</sub> evolution. <b>2017</b> , 209, 514-522	66
619	Three-dimensional MoS <sub>2</sub> /reduced graphene oxide aerogel as a macroscopic visible-light photocatalyst. <b>2017</b> , 38, 313-320	58
618	Recent Advances in Ultrathin Two-Dimensional Nanomaterials. <b>2017</b> , 117, 6225-6331	2919
617	AgS nanoparticle-decorated MoS <sub>2</sub> for enhanced electrocatalytic and photoelectrocatalytic activity in water splitting. <b>2017</b> , 46, 483-490	47
616	Synthesis and characterization of g-C <sub>3</sub> N <sub>4</sub> /BiNbO <sub>4</sub> composite materials with visible light photocatalytic activity. <b>2017</b> , 335, 94-101	17
615	Amorphous MoS <sub>x</sub> on CdS nanorods for highly efficient photocatalytic hydrogen evolution. <b>2017</b> , 246, 230-236	22
614	Modulation of charge carrier pathways in CdS nanospheres by integrating MoS <sub>2</sub> and Ni <sub>2</sub> P for improved migration and separation toward enhanced photocatalytic hydrogen evolution. <b>2017</b> , 7, 641-649	58

613	Thylakoid-Inspired Multishell g-CN Nanocapsules with Enhanced Visible-Light Harvesting and Electron Transfer Properties for High-Efficiency Photocatalysis. <i>ACS Nano</i> , <b>2017</b> , 11, 1103-1112	16.7	289
612	TiC MXene co-catalyst on metal sulfide photo-absorbers for enhanced visible-light photocatalytic hydrogen production. <b>2017</b> , 8, 13907		1073
611	Insight into the Role of Size Modulation on Tuning the Band Gap and Photocatalytic Performance of Semiconducting Nitrogen-Doped Graphene. <b>2017</b> , 33, 3161-3169		31
610	N-doped ZnO/MoS <sub>2</sub> binary heterojunctions: the dual role of 2D MoS <sub>2</sub> in the enhancement of photostability and photocatalytic activity under visible light irradiation for tetracycline degradation. <b>2017</b> , 1, 1093-1106		101
609	Layered MoS <sub>2</sub> coupled MOFs-derived dual-phase TiO <sub>2</sub> for enhanced photoelectrochemical performance. <b>2017</b> , 5, 4962-4971		62
608	High efficient noble metal free Zn(O,S) nanoparticles for hydrogen evolution. <b>2017</b> , 42, 5638-5648		49
607	Single Pt atoms deposition on g-C <sub>3</sub> N <sub>4</sub> nanosheets for photocatalytic H <sub>2</sub> evolution or NO oxidation under visible light. <b>2017</b> , 42, 27043-27054		67
606	Strain and pH facilitated artificial photosynthesis in monolayer MoS <sub>2</sub> nanosheets. <b>2017</b> , 5, 22265-22276		31
605	Enhanced photocatalytic hydrogen production of noble-metal free Ni-doped Zn(O,S) in ethanol solution. <b>2017</b> , 42, 25891-25902		27
604	Graphene decorated MoS <sub>2</sub> for eosin Y-sensitized hydrogen evolution from water under visible light. <b>2017</b> , 7, 46738-46744		14
603	Efficient Photocatalytic Activity of TiO <sub>2</sub> Nanocrystals Modified with Organic Electron Donor and Barium Doping for Azo Group Decomposition Under UV Irradiation. <b>2017</b> , 147, 2697-2705		
602	Hydrogenated MoS QD-TiO heterojunction mediated efficient solar hydrogen production. <b>2017</b> , 9, 17029-17036		5
601	Electronic structure and photocatalytic band offset of few-layer GeP <sub>2</sub> . <b>2017</b> , 5, 22146-22155		48
600	Preparation, Structure and Functional Properties of MoS <sub>2</sub> and WS <sub>2</sub> Nanocomposites with Inorganic Chalcogenide Semiconductors: a Review. <b>2017</b> , 53, 211-234		3
599	Sulfur vacancy induced high performance for photocatalytic H <sub>2</sub> production over 1T@2H phase MoS <sub>2</sub> nanolayers. <b>2017</b> , 7, 5635-5643		33
598	Enhance photocatalysis performance and mechanism of CdS and Ag synergistic co-catalyst supported on mesoporous g-C <sub>3</sub> N <sub>4</sub> nanosheets under visible-light irradiation. <b>2017</b> , 5, 5358-5368		23
597	Bifunctional NiFe inverse opal electrocatalysts with heterojunction Si solar cells for 9.54%-efficient unassisted solar water splitting. <b>2017</b> , 42, 1-7		33
596	Construction of a Noble-Metal-Free Photocatalytic H <sub>2</sub> Evolution System Using MoS <sub>2</sub> /Reduced Graphene Oxide Catalyst and Zinc Porphyrin Photosensitizer. <b>2017</b> , 121, 24452-24462		73

595	BiOI-promoted nano-on-micro BiOI-MoS <sub>2</sub> /CdS system for high-performance on photocatalytic H <sub>2</sub> evolution under visible light irradiation. <b>2017</b> , 42, 28337-28348	24
594	One-pot synthesis of MoS <sub>2</sub> /WS <sub>2</sub> ultrathin nanoflakes with vertically aligned structure on indium tin oxide as a photocathode for enhanced photo-assistant electrochemical hydrogen evolution reaction. <b>2017</b> , 7, 49309-49319	24
593	Superior Photocatalytic H Production with Cocatalytic Co/Ni Species Anchored on Sulfide Semiconductor. <b>2017</b> , 29, 1703258	155
592	Hydrothermal synthesis of N-doped RGO/MoSe <sub>2</sub> composites and enhanced electro-catalytic hydrogen evolution. <b>2017</b> , 52, 13561-13571	27
591	Roadmap on solar water splitting: current status and future prospects. <b>2017</b> , 1, 022001	115
590	Spatial separation of the hydrogen evolution center from semiconductors using a freestanding silica-sphere-supported Pt composite. <b>2017</b> , 19, 24249-24254	5
589	Developing an efficient NiCoS cocatalyst for improving the visible light H evolution performance of CdS nanoparticles. <b>2017</b> , 19, 25919-25926	36
588	Combining ZnS with WS <sub>2</sub> nanosheets to fabricate a broad-spectrum composite photocatalyst for hydrogen evolution. <b>2017</b> , 41, 12451-12458	18
587	Hydrogen generation by water splitting using MoS <sub>2</sub> and other transition metal dichalcogenides. <b>2017</b> , 41, 49-65	176
586	Noncovalent Functionalization of Monolayer MoS <sub>2</sub> with Carbon Nanotubes: Tuning Electronic Structure and Photocatalytic Activity. <b>2017</b> , 121, 21921-21929	19
585	Non-enzymatic sensing of hydrogen peroxide using a glassy carbon electrode modified with the layered MoS <sub>2</sub> -reduced graphene oxide and Prussian Blue. <b>2017</b> , 184, 4587-4595	18
584	Phosphorene Co-catalyst Advancing Highly Efficient Visible-Light Photocatalytic Hydrogen Production. <b>2017</b> , 129, 10509-10513	34
583	Coupling of Crumpled-Type Novel MoS with CeO Nanoparticles: A Noble-Metal-Free p-n Heterojunction Composite for Visible Light Photocatalytic H Production. <b>2017</b> , 2, 3745-3753	90
582	Spatial charge separation and transfer in ultrathin CdIn <sub>2</sub> S <sub>4</sub> /rGO nanosheet arrays decorated by ZnS quantum dots for efficient visible-light-driven hydrogen evolution. <b>2017</b> , 39, 513-523	70
581	Boosting Hydrogen Evolution Performance of MoS <sub>2</sub> by Band Structure Engineering. <b>2017</b> , 4, 1700303	31
580	Electron-Selective TiO <sub>2</sub> /CVD-Graphene Layers for Photocorrosion Inhibition in Cu <sub>2</sub> O Photocathodes. <b>2017</b> , 4, 1700271	22
579	Phosphorene Co-catalyst Advancing Highly Efficient Visible-Light Photocatalytic Hydrogen Production. <b>2017</b> , 56, 10373-10377	247
578	Rational design of freestanding MoS <sub>2</sub> monolayers for hydrogen evolution reaction. <b>2017</b> , 39, 409-417	83



577	Efficient Electron Transfer across a ZnO-MoS <sub>2</sub> -Reduced Graphene Oxide Heterojunction for Enhanced Sunlight-Driven Photocatalytic Hydrogen Evolution. <b>2017</b> , 10, 3588-3603	126
576	Hydrothermal fabrication of few-layer MoS <sub>2</sub> nanosheets within nanopores on TiO <sub>2</sub> derived from MIL-125(Ti) for efficient photocatalytic H <sub>2</sub> evolution. <b>2017</b> , 426, 177-184	39
575	Structure-controlled CdS(0D, 1D, 2D) embedded onto 2D ZnS porous nanosheets for highly efficient photocatalytic hydrogen generation. <b>2017</b> , 7, 24864-24869	16
574	Plasmon-Enhanced Photoelectrochemical Current and Hydrogen Production of (MoS <sub>2</sub> -TiO <sub>2</sub> )/Au Hybrids. <b>2017</b> , 7, 7178	27
573	Tantalum (Oxy)Nitride: Narrow Bandgap Photocatalysts for Solar Hydrogen Generation. <b>2017</b> , 3, 365-378	32
572	Synthesis of graphene/tourmaline/TiO <sub>2</sub> composites with enhanced activity for photocatalytic degradation of 2-propanol. <b>2017</b> , 38, 1307-1314	28
571	Nanocomposite of MoS <sub>2</sub> -RGO as Facile, Heterogeneous, Recyclable, and Highly Efficient Green Catalyst for One-Pot Synthesis of Indole Alkaloids. <b>2017</b> , 5, 8551-8567	47
570	Facile Synthesis of MoS <sub>2</sub> /g-C <sub>3</sub> N <sub>4</sub> /GO Ternary Heterojunction with Enhanced Photocatalytic Activity for Water Splitting. <b>2017</b> , 5, 7878-7886	110
569	Strongly interactive 0D/2D hetero-structure of a ZnCdS nano-particle decorated phosphorene nano-sheet for enhanced visible-light photocatalytic H <sub>2</sub> production. <b>2017</b> , 53, 9882-9885	58
568	A review of transition metal chalcogenide/graphene nanocomposites for energy storage and conversion. <b>2017</b> , 28, 2180-2194	127
567	Integrating Zeolite-Type Chalcogenide with Titanium Dioxide Nanowires for Enhanced Photoelectrochemical Activity. <b>2017</b> , 33, 13634-13639	14
566	Investigating the role of MoS <sub>2</sub> /reduced graphene oxide as cocatalyst on Cu <sub>2</sub> O activity in catalytic and photocatalytic reactions. <b>2017</b> , 41, 7998-8005	23
565	Edge Epitaxy of Two-Dimensional MoSe and MoS Nanosheets on One-Dimensional Nanowires. <b>2017</b> , 139, 8653-8660	90
564	Interface engineering of a noble-metal-free 2D/2D MoS <sub>2</sub> /Cu-ZnIn <sub>2</sub> S <sub>4</sub> photocatalyst for enhanced photocatalytic H <sub>2</sub> production. <b>2017</b> , 5, 15771-15779	145
563	Tailoring catalytic activities of transition metal disulfides for water splitting. <b>2017</b> , 4, 68-80	19
562	In situ photodeposition of MoS <sub>x</sub> on CdS nanorods as a highly efficient cocatalyst for photocatalytic hydrogen production. <b>2017</b> , 5, 15287-15293	75
561	Facile synthesis of MoS <sub>2</sub> /Ag <sub>2</sub> CrO <sub>4</sub> composites with improved visible light driven photocatalytic performance. <b>2017</b> , 28, 14069-14078	4
560	Efficient visible-light-driven hydrogen generation from water splitting catalyzed by highly stable CdS@Mo <sub>2</sub> C <sub>2</sub> core-shell nanorods. <b>2017</b> , 5, 15862-15868	53

559	Synergetic effect of MoS <sub>2</sub> and graphene as cocatalysts for enhanced photocatalytic activity of BiPO <sub>4</sub> nanoparticles. <b>2017</b> , 425, 100-106	63
558	A novel hybrid artificial photosynthesis system using MoS <sub>2</sub> embedded in carbon nanofibers as electron relay and hydrogen evolution catalyst. <b>2017</b> , 352, 35-41	27
557	Metal-complex chromophores for solar hydrogen generation. <b>2017</b> , 46, 603-631	239
556	Hydrothermal fabrication of hyacinth flower-like WS <sub>2</sub> nanorods and their photocatalytic properties. <b>2017</b> , 189, 282-285	20
555	Bandgap engineering of (AgIn) <sub>x</sub> Zn <sub>2</sub> (1-x)S <sub>2</sub> quantum dot photosensitizers for photocatalytic H <sub>2</sub> generation. <b>2017</b> , 204, 58-66	42
554	Recent Progress on Visible Light Responsive Heterojunctions for Photocatalytic Applications. <b>2017</b> , 33, 1-22	146
553	BiVO <sub>4</sub> nanowires decorated with CdS nanoparticles as Z-scheme photocatalyst with enhanced H <sub>2</sub> generation. <b>2017</b> , 201, 77-83	218
552	Constructing 2D layered hybrid CdS nanosheets/MoS <sub>2</sub> heterojunctions for enhanced visible-light photocatalytic H <sub>2</sub> generation. <b>2017</b> , 391, 580-591	245
551	Core-shell LaPO <sub>4</sub> /g-C <sub>3</sub> N <sub>4</sub> nanowires for highly active and selective CO <sub>2</sub> reduction. <b>2017</b> , 201, 629-635	88
550	Interfacial charge transfer and mechanisms of enhanced photocatalysis of an anatase TiO <sub>2</sub> (0 0 1)-MoS <sub>2</sub> -graphene nanocomposite: A first-principles investigation. <b>2017</b> , 126, 43-51	18
549	Facile synthesis of high-thermostably ordered mesoporous TiO/SiO nanocomposites: An effective bifunctional candidate for removing arsenic contaminations. <b>2017</b> , 485, 32-38	30
548	An efficient hydrogen evolution catalyst composed of palladium phosphorous sulphide (PdP~0.33S~1.67) and twin nanocrystal Zn <sub>0.5</sub> Cd <sub>0.5</sub> S solid solution with both homo- and hetero-junctions. <b>2017</b> , 10, 225-235	135
547	Sequential two-step hydrothermal growth of MoS <sub>2</sub> /CdS core-shell heterojunctions for efficient visible light-driven photocatalytic H <sub>2</sub> evolution. <b>2017</b> , 203, 955-963	131
546	One-dimensional CdS@MoS <sub>2</sub> core-shell nanowires for boosted photocatalytic hydrogen evolution under visible light. <b>2017</b> , 202, 298-304	279
545	Highly efficient photocatalytic H <sub>2</sub> evolution over MoS <sub>2</sub> /CdS-TiO <sub>2</sub> nanofibers prepared by an electrospinning mediated photodeposition method. <b>2017</b> , 202, 374-380	155
544	Hybridization of a Metal-Organic Framework with a Two-Dimensional Metal Oxide Nanosheet: Optimization of Functionality and Stability. <b>2017</b> , 29, 1028-1035	16
543	Synthesis and photocatalytic hydrogen production activity of the Ni-CH <sub>3</sub> CH <sub>2</sub> NH <sub>2</sub> /H <sub>1.78</sub> Sr <sub>0.78</sub> Bi <sub>0.22</sub> Nb <sub>2</sub> O <sub>7</sub> hybrid layered perovskite. <b>2017</b> , 38, 2039-2047	5
542	Photocatalytic hydrogen evolution activity over MoS <sub>2</sub> /ZnIn <sub>2</sub> S <sub>4</sub> microspheres. <b>2017</b> , 38, 2067-2075	48

541	2D Transition Metal Dichalcogenides and Graphene-Based Ternary Composites for Photocatalytic Hydrogen Evolution and Pollutants Degradation. <b>2017</b> , 7,	26
540	Two-dimensional carbon-based nanocomposites for photocatalytic energy generation and environmental remediation applications. <b>2017</b> , 8, 1571-1600	94
539	Dual-Native Vacancy Activated Basal Plane and Conductivity of MoSe with High-Efficiency Hydrogen Evolution Reaction. <b>2018</b> , 14, e1704150	78
538	RGO-MoS <sub>2</sub> Supported NiCo <sub>2</sub> O <sub>4</sub> Catalyst toward Solar Water Splitting and Dye Degradation. <b>2018</b> , 6, 5238-5247	60
537	Multidirectional-charge-transfer urchin-type Mo-doped W <sub>18</sub> O <sub>49</sub> nanostructures on CdS nanorods for enhanced photocatalytic hydrogen evolution. <b>2018</b> , 8, 1880-1891	17
536	Two-dimensional transition metal dichalcogenide hybrid materials for energy applications. <b>2018</b> , 19, 16-40	99
535	Cobalt phosphide nanowires as efficient co-catalyst for photocatalytic hydrogen evolution over Zn <sub>0.5</sub> Cd <sub>0.5</sub> S. <b>2018</b> , 230, 210-219	112
534	Solar energy conversion on g-C <sub>3</sub> N <sub>4</sub> photocatalyst: Light harvesting, charge separation, and surface kinetics. <b>2018</b> , 27, 1111-1123	102
533	Research Frontiers in Solar Light Harvesting. <b>2018</b> , 1-26	
532	Type-I Transition Metal Dichalcogenides Lateral Homojunctions: Layer Thickness and External Electric Field Effects. <b>2018</b> , 14, e1800365	30
531	Recent progress in ultrathin two-dimensional semiconductors for photocatalysis. <b>2018</b> , 130, 1-39	88
530	Constructing a ZnInS nanoparticle/MoS-RGO nanosheet 0D/2D heterojunction for significantly enhanced visible-light photocatalytic H <sub>2</sub> production. <b>2018</b> , 47, 6800-6807	29
529	g-C <sub>3</sub> N <sub>4</sub> Loading Black Phosphorus Quantum Dot for Efficient and Stable Photocatalytic H <sub>2</sub> Generation under Visible Light. <b>2018</b> , 28, 1800668	192
528	Revealing the Double-Edged Sword Role of Graphene on Boosted Charge Transfer versus Active Site Control in TiO Nanotube Arrays@RGO/MoS Heterostructure. <b>2018</b> , 14, e1704531	38
527	2D-2D Nanocomposite of MoS <sub>2</sub> -Graphitic Carbon Nitride as Multifunctional Catalyst for Sustainable Synthesis of C <sub>3</sub> -Functionalized Indoles. <b>2018</b> , 10, 3121-3132	24
526	MoS Quantum Dots@TiO Nanotube Arrays: An Extended-Spectrum-Driven Photocatalyst for Solar Hydrogen Evolution. <b>2018</b> , 11, 1708-1721	65
525	Highly Efficient and Stable CO <sub>2</sub> Reduction Photocatalyst with a Hierarchical Structure of Mesoporous TiO <sub>2</sub> on 3D Graphene with Few-Layered MoS <sub>2</sub> . <b>2018</b> , 6, 5718-5724	84
524	Novel Cu <sub>3</sub> P/g-C <sub>3</sub> N <sub>4</sub> p-n heterojunction photocatalysts for solar hydrogen generation. <b>2018</b> , 61, 861-868	64

523	Hydrogen production from organic fatty acids using carbon-doped TiO <sub>2</sub> nanoparticles under visible light irradiation. <b>2018</b> , 43, 4335-4346	16
522	Largely enhanced photocatalytic activity of Au/XS/Au (X = Re, Mo) antenna-reactor hybrids: charge and energy transfer. <b>2018</b> , 10, 4130-4137	25
521	Tailoring ultra-thin MoS <sub>2</sub> films via post-treatment of solid state precursor phases. <b>2018</b> , 649, 177-186	3
520	Near-infrared-driven Cr(VI) reduction in aqueous solution based on a MoS <sub>2</sub> /Sb <sub>2</sub> S <sub>3</sub> photocatalyst. <b>2018</b> , 8, 1545-1554	33
519	Photodeposition of amorphous MoS <sub>x</sub> cocatalyst on TiO <sub>2</sub> nanosheets with {001} facets exposed for highly efficient photocatalytic hydrogen evolution. <b>2018</b> , 43, 3223-3234	21
518	Cobalt lactate complex as a hole cocatalyst for significantly enhanced photocatalytic H <sub>2</sub> production activity over CdS nanorods. <b>2018</b> , 8, 1599-1605	24
517	Faster Electron Injection and More Active Sites for Efficient Photocatalytic H Evolution in g-C <sub>3</sub> N <sub>4</sub> /MoS <sub>2</sub> Hybrid. <b>2018</b> , 14, e1703277	164
516	Three-dimensional supramolecular phosphomolybdate architecture-derived Mo-based electrocatalytic system for overall water splitting. <b>2018</b> , 5, 819-826	14
515	Metallic 1T-Li <sub>x</sub> MoS <sub>2</sub> co-catalyst enhanced photocatalytic hydrogen evolution over ZnIn <sub>2</sub> S <sub>4</sub> fluoriated microspheres under visible light irradiation. <b>2018</b> , 8, 1375-1382	26
514	CdS nanosphere-decorated hollow polyhedral ZCO derived from a metal-organic framework (MOF) for effective photocatalytic water evolution. <b>2018</b> , 10, 4463-4474	57
513	Robust and selective electrochemical reduction of CO <sub>2</sub> : the case of integrated 3D TiO <sub>2</sub> @MoS <sub>2</sub> architectures and Ti-B bonding effects. <b>2018</b> , 6, 4706-4713	49
512	Towards unique shear thinning behaviors under electric and magnetic fields achieved by TiO <sub>2</sub> decorated magnetic MoS <sub>2</sub> nanosheets: lubricating effects. <b>2018</b> , 6, 1836-1843	13
511	One-step chemical vapor deposition of MoS <sub>2</sub> nanosheets on SiNWs as photocathodes for efficient and stable solar-driven hydrogen production. <b>2018</b> , 10, 3518-3525	44
510	Controlling electronic properties of MoS <sub>2</sub> /graphene oxide heterojunctions for enhancing photocatalytic performance: the role of oxygen. <b>2018</b> , 20, 1974-1983	17
509	Recent development on MoS <sub>2</sub> -based photocatalysis: A review. <b>2018</b> , 35, 39-55	251
508	Noble metal-free NiCo nanoparticles supported on montmorillonite/MoS <sub>2</sub> heterostructure as an efficient UV-visible light-driven photocatalyst for hydrogen evolution. <b>2018</b> , 43, 1375-1385	16
507	Fabrication of ZnS with necklace-like hierarchical structure-decorated graphene and its photocatalytic performance. <b>2018</b> , 115, 97-102	19
506	Two-dimensional nickel hydroxide/sulfides nanosheet as an efficient cocatalyst for photocatalytic H evolution over CdS nanospheres. <b>2018</b> , 514, 634-641	26

505	NiS <sub>x</sub> Quantum Dots Accelerate Electron Transfer in Cd <sub>0.8</sub> Zn <sub>0.2</sub> S Photocatalytic System via an rGO Nanosheet Bridge toward Visible-Light-Driven Hydrogen Evolution. <b>2018</b> , 8, 1532-1545	103
504	Oxygen vacancy rich CuO based composite material with nitrogen doped carbon as matrix for photocatalytic H <sub>2</sub> production and organic pollutant removal. <b>2018</b> , 47, 2031-2038	34
503	Electrocatalytic and photocatalytic hydrogen evolution integrated with organic oxidation. <b>2018</b> , 54, 5943-5958	58
502	Three-Dimensional Nanoporous Heterojunction of Monolayer MoS <sub>2</sub> @rGO for Photoenhanced Hydrogen Evolution Reaction. <b>2018</b> , 1, 2183-2191	19
501	Anchoring Ni <sub>2</sub> P on the UiO-66-NH <sub>2</sub> /g-C <sub>3</sub> N <sub>4</sub> -derived C-doped ZrO <sub>2</sub> /g-C <sub>3</sub> N <sub>4</sub> Heterostructure: Highly Efficient Photocatalysts for H <sub>2</sub> Production from Water Splitting. <b>2018</b> , 10, 3327-3335	34
500	Significant Enhancement of Hydrogen Production in MoS <sub>2</sub> /Cu <sub>2</sub> ZnSnS <sub>4</sub> Nanoparticles. <b>2018</b> , 35, 1700472	2
499	Electron transfer dynamics of quaternary sulfur semiconductor/mos 2 layer-on-layer for efficient visible-light h <sub>2</sub> evolution. <b>2018</b> , 235, 9-16	8
498	Novel C fibers@MoS <sub>2</sub> nanoplates core-shell composite for efficient solar-driven photocatalytic degradation of Cr(VI) and RhB. <b>2018</b> , 753, 378-387	9
497	High-performance for hydrogen evolution and pollutant degradation of reduced graphene oxide/two-phase g-CN heterojunction photocatalysts. <b>2018</b> , 25, 14486-14498	18
496	Solvothermal fabrication of MoS <sub>2</sub> anchored on ZnIn <sub>2</sub> S <sub>4</sub> microspheres with boosted photocatalytic hydrogen evolution activity. <b>2018</b> , 43, 6977-6986	52
495	Highly efficient near-infrared light photocatalytic hydrogen evolution over MoS <sub>2</sub> supported Ta <sub>2</sub> O <sub>5</sub> combined with an up-conversion luminescence agent (Er <sup>3+</sup> , Yb <sup>3+</sup> :NaYF <sub>4</sub> /MoS <sub>2</sub> @Ta <sub>2</sub> O <sub>5</sub> nanocomposite). <b>2018</b> , 42, 6134-6143	3
494	The synergetic effects of TiC MXene and Pt as co-catalysts for highly efficient photocatalytic hydrogen evolution over g-CN. <b>2018</b> , 20, 11405-11411	134
493	Ultra-small freestanding amorphous molybdenum sulfide colloidal nanodots for highly efficient photocatalytic hydrogen evolution reaction. <b>2018</b> , 232, 446-453	45
492	CdS-Based photocatalysts. <b>2018</b> , 11, 1362-1391	765
491	High light harvesting efficiency CuInS quantum dots/TiO <sub>2</sub> /MoS photocatalysts for enhanced visible light photocatalytic H <sub>2</sub> production. <b>2018</b> , 47, 5652-5659	26
490	Heterogeneous p-n Junction CdS/CuO Nanorod Arrays: Synthesis and Superior Visible-Light-Driven Photoelectrochemical Performance for Hydrogen Evolution. <b>2018</b> , 10, 11652-11662	115
489	Recent advances in two-dimensional transition metal dichalcogenides-graphene heterostructured materials for electrochemical applications. <b>2018</b> , 96, 51-85	90
488	ZnO/MoX (X = S, Se) composites used for visible light photocatalysis.. <b>2018</b> , 8, 10828-10835	24

487	Facile microwave assisted synthesis of N-rich carbon quantum dots/dual-phase TiO <sub>2</sub> heterostructured nanocomposites with high activity in CO <sub>2</sub> photoreduction. <b>2018</b> , 231, 269-276	80
486	Hierarchical nanosheet-based BiMoO microboxes for efficient photocatalytic performance. <b>2018</b> , 47, 5542-5547	27
485	NiS and MoS nanosheet co-modified graphitic CN ternary heterostructure for high efficient visible light photodegradation of antibiotic. <b>2018</b> , 341, 10-19	138
484	Solvothermal synthesis of metallic 1T-WS <sub>2</sub> : A supporting co-catalyst on carbon nitride nanosheets toward photocatalytic hydrogen evolution. <b>2018</b> , 335, 282-289	121
483	Controllable synthesis of self-assembled MoS <sub>2</sub> hollow spheres for photocatalytic application. <b>2018</b> , 29, 753-761	5
482	Synergistic effect based Ni <sub>x</sub> Co <sub>1-x</sub> architected Zn <sub>0.75</sub> Cd <sub>0.25</sub> S nanocrystals: An ultrahigh and stable photocatalysts for hydrogen evolution from water splitting. <b>2018</b> , 224, 17-26	37
481	Synergistic effect of electron-transfer mediator and interfacial catalytic active-site for the enhanced H <sub>2</sub> -evolution performance: A case study of CdS-Au photocatalyst. <b>2018</b> , 220, 561-569	135
480	Graphene-based heterojunction photocatalysts. <b>2018</b> , 430, 53-107	293
479	Graphene and g-C <sub>3</sub> N <sub>4</sub> based photocatalysts for NO <sub>x</sub> removal: A review. <b>2018</b> , 430, 18-52	121
478	Synthesis of MoS <sub>2</sub> quantum dots cocatalysts and their efficient photocatalytic performance for hydrogen evolution. <b>2018</b> , 332, 449-455	52
477	Comparative studies on the electrocatalytic hydrogen evolution property of Cu <sub>2</sub> SnS <sub>3</sub> and Cu <sub>4</sub> SnS <sub>4</sub> ternary alloys prepared by solvothermal method. <b>2018</b> , 43, 3967-3975	18
476	Effective harvesting of UV induced production of excitons from Fe <sub>3</sub> O <sub>4</sub> with proficient rGO-PTH acting as BI-functional redox photocatalyst. <b>2018</b> , 115, 1035-1042	6
475	Highly efficient simultaneous hydrogen evolution and benzaldehyde production using cadmium sulfide nanorods decorated with small cobalt nanoparticles under visible light. <b>2018</b> , 357, 147-153	64
474	Constructing 2D graphitic carbon nitride nanosheets/layered MoS <sub>2</sub> /graphene ternary nanojunction with enhanced photocatalytic activity. <b>2018</b> , 225, 468-476	140
473	Tuning the activity of the inert MoS surface via graphene oxide support doping towards chemical functionalization and hydrogen evolution: a density functional study. <b>2018</b> , 20, 1861-1871	18
472	Ultrahigh, Ultrafast, and Self-Powered Visible-Near-Infrared Optical Position-Sensitive Detector Based on a CVD-Prepared Vertically Standing Few-Layer MoS/Si Heterojunction. <b>2018</b> , 5, 1700502	57
471	Porphyrin/SiO <sub>2</sub> /Cp*Rh(bpy)Cl Hybrid Nanoparticles Mimicking Chloroplast with Enhanced Electronic Energy Transfer for Biocatalyzed Artificial Photosynthesis. <b>2018</b> , 28, 1705083	31
470	CoMoS <sub>2</sub> /rGO/C <sub>3</sub> N <sub>4</sub> ternary heterojunctions catalysts with high photocatalytic activity and stability for hydrogen evolution under visible light irradiation. <b>2018</b> , 435, 1296-1306	26

469	Morphology-controlled synthesis of TiO <sub>2</sub> /MoS <sub>2</sub> nanocomposites with enhanced visible-light photocatalytic activity. <b>2018</b> , 5, 145-152	29
468	Rational and green synthesis of novel two-dimensional WS <sub>2</sub> /MoS <sub>2</sub> heterojunction via direct exfoliation in ethanol-water targeting advanced visible-light-responsive photocatalytic performance. <b>2018</b> , 513, 389-399	52
467	Enhanced photocatalytic performance of KNbO <sub>3</sub> (100)/reduced graphene oxide nanocomposites investigated using first-principles calculations: RGO reductivity effect. <b>2018</b> , 434, 932-939	7
466	Coordination Polymer Derived Sulfur Vacancies Rich CdS Composite Photocatalyst with Nitrogen Doped Carbon as Matrix for H <sub>2</sub> Production. <b>2018</b> , 6, 854-861	37
465	Enhanced photoelectrochemical activity in the heterostructure of vertically aligned few-layer MoS <sub>2</sub> flakes on ZnO. <b>2018</b> , 260, 150-156	39
464	Highly efficient dual cocatalyst-modified TiO <sub>2</sub> photocatalyst: RGO as electron-transfer mediator and MoS <sub>x</sub> as H <sub>2</sub> -evolution active site. <b>2018</b> , 430, 176-183	56
463	Remarkably enhanced photocatalytic hydrogen evolution over MoS <sub>2</sub> nanosheets loaded on uniform CdS nanospheres. <b>2018</b> , 430, 523-530	86
462	Biomimetic structure design and construction of cactus-like MoS <sub>2</sub> /Bi <sub>19</sub> Cl <sub>3</sub> S <sub>27</sub> photocatalysts for efficient hydrogen evolution. <b>2018</b> , 6, 21404-21409	15
461	Large surface and pore structure of mesoporous WS <sub>2</sub> and RGO nanosheets with small amount of Pt as a highly efficient electrocatalyst for hydrogen evolution. <b>2018</b> , 43, 22905-22916	6
460	Photo-Induced Charge Separation vs. Degradation of a BODIPY-Based Photosensitizer Assessed by TDDFT and RASPT2. <b>2018</b> , 8, 520	9
459	Mixed-Phase (2H and 1T) MoS <sub>2</sub> Catalyst for a Highly Efficient and Stable Si Photocathode. <b>2018</b> , 8, 580	13
458	Ultrasmall MoO Clusters as a Novel Cocatalyst for Photocatalytic Hydrogen Evolution. <b>2019</b> , 31, e1804883	82
457	Design, modification and application of semiconductor photocatalysts. <b>2018</b> , 93, 590-602	49
456	2D layered transition metal dichalcogenides (MoS <sub>2</sub> ): Synthesis, applications and theoretical aspects. <b>2018</b> , 13, 242-270	75
455	An adaptive geometry regulation strategy for 3D graphene materials: towards advanced hybrid photocatalysts. <b>2018</b> , 9, 8876-8882	20
454	One-pot synthesis of CdS-MoS <sub>2</sub> /RGO-E nano-heterostructure with well-defined interfaces for efficient photocatalytic H <sub>2</sub> evolution. <b>2018</b> , 43, 20382-20391	33
453	Synthesis and investigation on synergetic effect of rGO-ZnO decorated MoS <sub>2</sub> microflowers with enhanced photocatalytic and antibacterial activity. <b>2018</b> , 559, 43-53	36
452	Photocatalytic properties of two-dimensional graphene and layered transition-metal dichalcogenides based photocatalyst for photoelectrochemical hydrogen generation: An overview. <b>2018</b> , 43, 18925-18945	53

451	MoS <sub>2</sub> /CQDs obtained by photoreduction for assembly of a ternary MoS <sub>2</sub> /CQDs/ZnIn <sub>2</sub> S <sub>4</sub> nanocomposite for efficient photocatalytic hydrogen evolution under visible light. <b>2018</b> , 6, 19735-19742	53
450	Design of active nickel single-atom decorated MoS <sub>2</sub> as a pH-universal catalyst for hydrogen evolution reaction. <b>2018</b> , 53, 458-467	147
449	Self-assembly optimization of cadmium/molybdenum sulfide hybrids by cation coordination competition toward extraordinarily efficient photocatalytic hydrogen evolution. <b>2018</b> , 6, 18396-18402	21
448	Synthesis of porous BiOCl nanocubes with enhanced visible light photocatalytic performance. <b>2018</b> , 711, 207-212	11
447	Molybdenum-Based Co-catalysts in Photocatalytic Hydrogen Production: Categories, Structures, and Roles. <b>2018</b> , 11, 3871-3881	24
446	Novel polymer supported graphene and molybdenum sulfide as highly efficient cocatalyst for photocatalytic hydrogen evolution. <b>2018</b> , 43, 18105-18114	9
445	Hydrothermal synthesis of MoS <sub>2</sub> /CC composite with enhanced photo-degradation activity and easy recycle property. <b>2018</b> , 29, 18238-18248	2
444	Photoinduced Electron Transfer at the Interface between Heterogeneous Two-Dimensional Layered Materials. <b>2018</b> , 122, 21651-21658	7
443	Controllable Fabrication of Regular Hexagon-Shaped SnS <sub>2</sub> Nanoplates and Their Enhanced Visible-Light-Driven H <sub>2</sub> Production Activity. <b>2018</b> , 1, 2923-2933	31
442	Controllable solution-fabrication of triphasic 2H@1T-MoS <sub>2</sub> /graphene heterostructure with assistance of supercritical CO <sub>2</sub> . <b>2018</b> , 12, 41-49	8
441	High-performance microwave absorption materials based on MoS <sub>2</sub> -graphene isomorphic hetero-structures. <b>2018</b> , 758, 62-71	53
440	Efficiently visible-light-induced photoactivity of MoS <sub>2</sub> nanoflowers/chromic oxide/protonated titanate nanoflakes edge-on ternary heterostructures for production of hydrogen. <b>2018</b> , 761, 31-40	10
439	A comparison of temperature dependent photoluminescence and photo-catalytic properties of different MoS <sub>2</sub> nanostructures. <b>2018</b> , 455, 379-391	18
438	Facile synthesis of noble-metal free polygonal Zn <sub>2</sub> TiO <sub>4</sub> nanostructures for highly efficient photocatalytic hydrogen evolution under solar light irradiation. <b>2018</b> , 43, 13145-13157	24
437	Cadmium sulfide-based nanomaterials for photocatalytic hydrogen production. <b>2018</b> , 6, 11606-11630	245
436	Stable multiphase 1T/2H MoSe <sub>2</sub> nanosheets integrated with 1D sulfide semiconductor for drastically enhanced visible-light photocatalytic hydrogen evolution. <b>2018</b> , 238, 27-37	65
435	In Silico Optimization of Organic-Inorganic Hybrid Perovskites for Photocatalytic Hydrogen Evolution Reaction in Acidic Solution. <b>2018</b> , 122, 20918-20922	5
434	Advances in materials engineering of CdS coupled with dual cocatalysts of graphene and MoS <sub>2</sub> for photocatalytic hydrogen evolution. <b>2018</b> , 90, 1379-1392	4



433	A Mn-cluster based coordination polymer as a co-catalyst of CdS for enhanced visible-light driven H <sub>2</sub> evolution. <b>2018</b> , 47, 10857-10860	7
432	Constructing film composites of silicon nanowires@CdS quantum dot arrays with ameliorated photocatalytic performance. <b>2018</b> , 42, 14096-14103	11
431	Direct Photoinduced Synthesis of Amorphous CoMoS <sub>x</sub> Cocatalyst and Its Improved Photocatalytic H <sub>2</sub> -Evolution Activity of CdS. <b>2018</b> , 6, 12436-12445	67
430	SnS nanoribbon/graphene mixed-dimensional heterostructures: Group VII passivation and quantum size effects. <b>2018</b> , 766, 215-220	2
429	Brief review of monolayer molybdenum disulfide application in gas sensor. <b>2018</b> , 545, 510-518	28
428	Synthesis, properties, and optoelectronic applications of two-dimensional MoS <sub>2</sub> and MoS <sub>2</sub> -based heterostructures. <b>2018</b> , 47, 6101-6127	189
427	Noble-metal-free heterostructure for efficient hydrogen evolution in visible region: Molybdenum nitride/ultrathin graphitic carbon nitride. <b>2018</b> , 238, 318-327	125
426	Facile construction of MoS <sub>2</sub> /CdS eutectic clusters anchored on rGO edge with enhanced hydrogen generation performance. <b>2018</b> , 317, 99-107	17
425	Ultrafast Energy Dissipation via Coupling with Internal and External Phonons in Two-Dimensional MoS <sub>2</sub> . <i>ACS Nano</i> , <b>2018</b> , 12, 8961-8969	16.7 43
424	Phase polymorphism and electronic structures of TeSe <sub>2</sub> . <b>2018</b> , 6, 10218-10225	9
423	A facile cation-exchange approach to 2D PbS/amorphous MoS <sub>x</sub> heterojunction composites with enhanced photocatalytic activity. <b>2018</b> , 768, 399-406	12
422	Enhanced visible light photocatalytic non-oxygen coupling of amines to imines integrated with hydrogen production over Ni/CdS nanoparticles. <b>2018</b> , 8, 5148-5154	27
421	Synergy removal of Cr (VI) and organic pollutants over RP-MoS <sub>2</sub> /rGO photocatalyst. <b>2018</b> , 239, 204-213	128
420	Metal-semiconductor ternary hybrids for efficient visible-light photocatalytic hydrogen evolution. <b>2018</b> , 6, 13225-13235	24
419	Electronic properties and enhanced reactivity of MoS <sub>2</sub> monolayers with substitutional gold atoms embedded into sulfur vacancies. <b>2018</b> , 455, 758-770	16
418	Rational design of a multidimensional N-doped porous carbon/MoS <sub>2</sub> /CNT nano-architecture hybrid for high performance lithium-sulfur batteries. <b>2018</b> , 6, 13835-13847	74
417	Effect of carbon sources on morphologies and electrochemical properties of MoS <sub>2</sub> /carbon composites. <b>2019</b> , 25, 2087-2092	5
416	Fabrication of dual direct Z-scheme g-C <sub>3</sub> N <sub>4</sub> /MoS <sub>2</sub> /Ag <sub>3</sub> PO <sub>4</sub> photocatalyst and its oxygen evolution performance. <b>2019</b> , 463, 9-17	118

4 <sup>15</sup>	Earth-Abundant MoS and Cobalt Phosphate Dual Cocatalysts on 1D CdS Nanowires for Boosting Photocatalytic Hydrogen Production. <b>2019</b> , 35, 11056-11065	42
4 <sup>14</sup>	Electron directed migration cooperated with thermodynamic regulation over bimetallic NiFeP/g-C <sub>3</sub> N <sub>4</sub> for enhanced photocatalytic hydrogen evolution. <b>2019</b> , 259, 118078	74
4 <sup>13</sup>	Photocatalytic nitrogen fixation: the role of defects in photocatalysts. <b>2019</b> , 7, 19616-19633	108
4 <sup>12</sup>	Integrating noble-metal-free metallic vanadium carbide cocatalyst with CdS for efficient visible-light-driven photocatalytic H <sub>2</sub> evolution. <b>2019</b> , 259, 118029	66
4 <sup>11</sup>	In situ synthesis of Cu <sub>3</sub> P/g-C <sub>3</sub> N <sub>4</sub> heterojunction with superior photocatalytic hydrogen evolution. <b>2019</b> , 52, 465106	12
4 <sup>10</sup>	High-throughput Production of ZnO-MoS-Graphene Heterostructures for Highly Efficient Photocatalytic Hydrogen Evolution. <b>2019</b> , 12,	19
4 <sup>09</sup>	Spontaneous full photocatalytic water splitting on 2D MoSe/SnSe and WSe/SnSe vdW heterostructures. <b>2019</b> , 11, 14836-14843	73
4 <sup>08</sup>	Novel organo modified MoCdS <sub>3</sub> heterojunctions for enhancement of photocatalytic activity: The synergistic effects of surface modification and fast photogenerated carrier transfer. <b>2019</b> , 493, 561-568	
4 <sup>07</sup>	Incorporating p-Phenylene as an Electron-Donating Group into Graphitic Carbon Nitride for Efficient Charge Separation. <b>2019</b> , 12, 4285-4292	13
4 <sup>06</sup>	BiFeO <sub>3</sub> /MoS <sub>2</sub> nanocomposites with the synergistic effect between $\text{Mo}^{VI}/\text{Mo}^{IV}$ and $\text{Fe}^{III}/\text{Fe}^{II}$ redox cycles for enhanced Fenton-like activity. <b>2019</b> , 578, 123607	9
4 <sup>05</sup>	Visible-light-driven sonophotocatalysis and peroxymonosulfate activation over 3D urchin-like MoS <sub>2</sub> /C nanoparticles for accelerating levofloxacin elimination: Optimization and kinetic study. <b>2019</b> , 378, 122039	46
4 <sup>04</sup>	MoS <sub>2</sub> /Graphene Composites as Promising Materials for Energy Storage and Conversion Applications. <b>2019</b> , 6, 1900915	32
4 <sup>03</sup>	MoS <sub>2</sub> /Cu <sub>2</sub> O nanohybrid as a highly efficient catalyst for the photoelectrocatalytic hydrogen generation. <b>2019</b> , 256, 126622	2
4 <sup>02</sup>	Development photocatalyst reduce graphene oxide (RGO) composited with (Zn,Ni)(O,S) for photocatalytic hydrogen production. <b>2019</b> , 1230, 012102	2
4 <sup>01</sup>	Graphene Dispersed Bi <sub>2</sub> WO <sub>6</sub> Nanosheets with Promoted Interfacial Charge Separation for Visible Light Photocatalysis. <b>2019</b> , 11, 5487-5494	7
4 <sup>00</sup>	Recent Advances in Graphene-Based Materials for Photocatalytic H <sub>2</sub> Evolution. <b>2019</b> , 415-433	
3 <sup>99</sup>	Convenient Synthesis of WS <sub>2</sub> /MoS <sub>2</sub> Heterostructures with Enhanced Photocatalytic Performance. <b>2019</b> , 123, 27363-27368	6
3 <sup>98</sup>	Construction of Heterogenous S-C-S MoS/SnS/r-GO Heterojunction for Efficient CO Photoreduction. <b>2019</b> , 58, 15590-15601	31

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313	Non-metal boron modified carbon nitride tube with enhanced visible light-driven photocatalytic performance. <b>2019</b> , 110, 18-23	20
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264	Visible light active and noble metal free Nb <sub>4</sub> N <sub>5</sub> /TiO <sub>2</sub> nanobelt surface heterostructure for plasmonic enhanced solar water splitting. <b>2020</b> , 402, 126226	13
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261	Hybrid cocatalysts in semiconductor-based photocatalysis and photoelectrocatalysis. <b>2020</b> , 8, 14863-14894	66
260	Layered MoS <sub>2</sub> Grown on Anatase TiO <sub>2</sub> {001} Promoting Interfacial Electron Transfer to Enhance Photocatalytic Evolution of H <sub>2</sub> From H <sub>2</sub> S. <b>2020</b> , 1,	0
259	Atomic carbon chain-linked polymeric carbon nitride: Roles of the carbon chain in enhancing the photocatalytic hydrogen evolution performance. <b>2020</b> , 606, 117833	14
258	Competitive Self-Assembly of PANI Confined MoS <sub>2</sub> Boosting the Photocatalytic Activity of the Graphitic Carbon Nitride. <b>2020</b> , 8, 13352-13361	19
257	Non-noble metal ultrathin MoS <sub>2</sub> nanosheets modified Mn <sub>0.2</sub> Cd <sub>0.8</sub> S heterostructures for efficient photocatalytic H <sub>2</sub> evolution with visible light irradiation. <b>2020</b> , 45, 26770-26784	12
256	Recent advances of low-dimensional phosphorus-based nanomaterials for solar-driven photocatalytic reactions. <b>2020</b> , 424, 213516	37
255	Core-shell structured cadmium sulfide nanocomposites for solar energy utilization. <b>2020</b> , 282, 102209	15
254	Cobalt-doped MoS <sub>2</sub> enhances the evolution of hydrogen by piezo-electric catalysis under the 850 nm near-infrared light irradiation. <b>2020</b> , 44, 14291-14298	3

253	Construction of Nano-Fe <sub>2</sub> O <sub>3</sub> -Decorated Flower-Like MoS <sub>2</sub> with FeS Bonds for Efficient Photoreduction of CO <sub>2</sub> under Visible-Light Irradiation. <b>2020</b> , 8, 12603-12611	14
252	Ultrafine nano 1T-MoS <sub>2</sub> monolayers with NiO <sub>x</sub> as dual co-catalysts over TiO <sub>2</sub> photoharvester for efficient photocatalytic hydrogen evolution. <b>2020</b> , 279, 119387	34
251	Efficient visible-light induced H <sub>2</sub> evolution from T-CdxZn1-xS/defective MoS <sub>2</sub> nano-hybrid with both bulk twinning homojunctions and interfacial heterostructures. <b>2020</b> , 267, 118702	24
250	CoSe as non-noble-metal cocatalyst integrated with heterojunction photosensitizer for inexpensive H <sub>2</sub> production under visible light. <b>2020</b> , 390, 196-205	23
249	One-pot synthesis of hierarchical CdS/MoS <sub>2</sub> /rGO with enhanced (photo)electrocatalytic activities. <b>2020</b> , 759, 138047	5
248	Fabricating Ni <sub>x</sub> Co <sub>1-x</sub> O@C cocatalysts sensitized by CdS through electrostatic interaction for efficient photocatalytic H <sub>2</sub> evolution. <b>2020</b> , 45, 28437-28446	5
247	Harnessing photo/electro-catalytic activity nano-junctions in ternary nanocomposites for clean energy. <b>2020</b> , 12, 23461-23479	9
246	Plasmonic Ag-Decorated Few-Layer MoS Nanosheets Vertically Grown on Graphene for Efficient Photoelectrochemical Water Splitting. <b>2020</b> , 12, 172	14
245	Recent Progress, Challenges, and Prospects in Two-Dimensional Photo-Catalyst Materials and Environmental Remediation. <b>2020</b> , 12, 167	35
244	Enhanced Light-Driven Charge Separation and H <sub>2</sub> Generation Efficiency in WSe Nanosheet-Semiconductor Nanocrystal Heterostructures. <b>2020</b> , 12, 44769-44776	7
243	Three-Dimensional Carbonaceous Aerogels Embedded with Rh-SrTiO <sub>3</sub> for Enhanced Hydrogen Evolution Triggered by Efficient Charge Transfer and Light Absorption. <b>2020</b> , 3, 12134-12147	22
242	In situ synthesis of ultrafine metallic MoO <sub>2</sub> /carbon nitride nanosheets for efficient photocatalytic hydrogen generation: a prominent cocatalytic effect. <b>2020</b> , 10, 4053-4060	5
241	Efficient photocatalytic hydrogen evolution with high-crystallinity and noble metal-free red phosphorus-CdS nanorods. <b>2020</b> , 45, 17354-17366	16
240	The metallic 1T-phase WS <sub>2</sub> nanosheets as cocatalysts for enhancing the photocatalytic hydrogen evolution of g-C <sub>3</sub> N <sub>4</sub> nanotubes. <b>2020</b> , 274, 119114	70
239	Solid-state synthesis of ultrathin MoS <sub>2</sub> as a cocatalyst on mesoporous g-C <sub>3</sub> N <sub>4</sub> for excellent enhancement of visible light photoactivity. <b>2020</b> , 836, 155401	13
238	Design of a p-n heterojunction in 0D/3D MoS/g-CN composite for boosting the efficient separation of photogenerated carriers with enhanced visible-light-driven H <sub>2</sub> evolution.. <b>2020</b> , 10, 19169-19177	10
237	Visible Light Photocatalysts Based on Manganese Doped TiO <sub>2</sub> Integrated Within Monolithic Reduced Graphene Oxide/Polymer Porous Monolith. <b>2020</b> , 5, 5873-5882	5
236	Highly efficient water splitting over a RuO <sub>2</sub> /F-doped graphene electrocatalyst with ultra-low ruthenium content. <b>2020</b> , 7, 2188-2194	13

235	Lithium incorporation assisted synthesis of ultra-small Mo <sub>2</sub> C nanodots as efficient photocatalytic H <sub>2</sub> evolution cocatalysts. <b>2020</b> , 399, 125794	16
234	A review on 2D MoS <sub>2</sub> cocatalysts in photocatalytic H <sub>2</sub> production. <b>2020</b> , 56, 89-121	182
233	g-C <sub>3</sub> N <sub>4</sub> /CoAl-LDH 2D/2D hybrid heterojunction for boosting photocatalytic hydrogen evolution. <b>2020</b> , 45, 21331-21340	31
232	Inert basal plane activation of two-dimensional ZnIn <sub>2</sub> S <sub>4</sub> via Ni atom doping for enhanced co-catalyst free photocatalytic hydrogen evolution. <b>2020</b> , 8, 13376-13384	33
231	Facile in situ formation of a ternary 3D ZnInS-MoS microsphere/1D CdS nanorod heterostructure for high-efficiency visible-light photocatalytic H <sub>2</sub> production. <b>2020</b> , 12, 13791-13800	29
230	Superior Photocatalytic Hydrogen Evolution Performances of WS <sub>2</sub> over MoS <sub>2</sub> Integrated with CdS Nanorods. <b>2020</b> , 124, 14485-14495	17
229	. <b>2020</b> ,	
228	Bi <sub>2</sub> O <sub>2</sub> Se as a novel co-catalyst for photocatalytic hydrogen evolution reaction. <b>2020</b> , 400, 125931	18
227	Efficient visible-light piezophototronic activity of ZnO-Ag <sub>8</sub> S hybrid for degradation of organic dye molecule. <b>2020</b> , 143, 109473	9
226	Post-graphene 2D materials-based antimicrobial agents: focus on fabrication strategies and biosafety assessments. <b>2020</b> , 55, 7226-7246	19
225	Effect of reaction temperature and reaction time on the structure and properties of MoS <sub>2</sub> synthesized by hydrothermal method. <b>2020</b> , 58, 92-100	9
224	Promoting charge separation in dual defect mediated Z-scheme MoS <sub>2</sub> /g-C <sub>3</sub> N <sub>4</sub> photocatalysts for enhanced photocatalytic degradation activity: synergistic effect insight. <b>2020</b> , 594, 124668	15
223	One-step synthesis of P-doped MoS <sub>2</sub> for efficient photocatalytic hydrogen production. <b>2020</b> , 829, 154635	33
222	Recent progresses in porphyrin assisted hydrogen evolution. <b>2020</b> , 45, 11954-11975	12
221	Engineering Mo-O-C interface in MoS <sub>2</sub> @rGO via charge transfer boosts hydrogen evolution. <b>2020</b> , 399, 126018	28
220	Recent Progress on Fullerene-Based Materials: Synthesis, Properties, Modifications, and Photocatalytic Applications. <b>2020</b> , 13,	12
219	Interplay between Mesocrystals of CaTiO <sub>3</sub> and Edge Sulfur Atom Enriched MoS <sub>2</sub> on Reduced Graphene Oxide Nanosheets: Enhanced Photocatalytic Performance under Sunlight Irradiation. <b>2020</b> , 4, 427-444	47
218	Graphene-like MoS <sub>2</sub> -modified magnetic C-dot nanoflowers: an efficient magnetic solid-phase extraction adsorbent for monitoring of trace amounts of ibuprofen. <b>2020</b> , 12, 1570-1578	12

217	Observation of the hot-phonon effect in monolayer MoS. <b>2020</b> , 31, 235712	11
216	Bridge engineering in photocatalysis and photoelectrocatalysis. <b>2020</b> , 12, 5764-5791	51
215	3D Graphene-Based H <sub>2</sub> -Production Photocatalyst and Electrocatalyst. <b>2020</b> , 10, 1903802	109
214	Rational design of a novel p-n heterojunction based on 3D layered nanoflower MoS supported CoWO nanoparticles for superior photocatalytic hydrogen generation. <b>2020</b> , 569, 34-49	35
213	Graphene-Supported 2D transition metal dichalcogenide van der waals heterostructures. <b>2020</b> , 19, 100600	40
212	An aerogel adsorbent with bio-inspired interfacial adhesion between graphene and MoS <sub>2</sub> sheets for water treatment. <b>2020</b> , 512, 145717	22
211	Rapid Microwave-Assisted Synthesis of CdS/Graphene/MoS Tunable Heterojunctions and Their Application in Photocatalysis. <b>2020</b> , 26, 6643-6651	13
210	Research status of MoSe <sub>2</sub> and its composites: A review. <b>2020</b> , 139, 106388	8
209	Enhanced visible-light-assisted photocatalytic hydrogen generation by MoS <sub>2</sub> /g-C <sub>3</sub> N <sub>4</sub> nanocomposites. <b>2020</b> , 45, 8497-8506	19
208	Performance of Graphene-CdS Hybrid Nanocomposite Thin Film for Applications in Cu(In,Ga)Se Solar Cell and H <sub>2</sub> Production. <b>2020</b> , 10,	15
207	Efficient photocatalytic hydrogen evolution over MoS <sub>2</sub> /activated carbon composite sensitized by Erythrosin B under LED light irradiation. <b>2020</b> , 142, 106029	1
206	Highly efficient white-LED-light-driven photocatalytic hydrogen production using highly crystalline ZnFe <sub>2</sub> O <sub>4</sub> /MoS <sub>2</sub> nanocomposites. <b>2020</b> , 45, 32756-32769	25
205	Measurement of interfacial thermal conductance of few-layer MoS <sub>2</sub> supported on different substrates using Raman spectroscopy. <b>2020</b> , 127, 104301	16
204	Single Cobalt Atom Anchored Black Phosphorous Nanosheets as an Effective Cocatalyst Promotes Photocatalysis. <b>2020</b> , 12, 3870-3879	17
203	Vertically aligned FeOOH nanosheet arrays on alkali-treated nickel foam as highly efficient electrocatalyst for oxygen evolution reaction. <b>2020</b> , 574, 241-250	19
202	Effect of metal coating material on field emission of vertically grown layered MoS <sub>2</sub> nanosheets. <b>2020</b> , 177, 109386	6
201	MoS-Stratified CdS-CuS Core-Shell Nanorods for Highly Efficient Photocatalytic Hydrogen Production. <i>ACS Nano</i> , <b>2020</b> , 14, 5468-5479	16.7 54
200	Impact of edge structures on interfacial interactions and efficient visible-light photocatalytic activity of metal/semiconductor hybrid 2D materials. <b>2020</b> , 10, 3279-3289	24

199	One-step synthesis of CdS/CdSe/CuS hollow nanospheres in aqueous solution for enhanced photocatalytic hydrogen evolution. <b>2020</b> , 4, 3467-3476	8
198	Catalyzing the polysulfide conversion for promoting lithium sulfur battery performances: A review. <b>2021</b> , 54, 434-451	53
197	Cu (II) decorated thiol-functionalized MOF as an efficient transfer medium of charge carriers promoting photocatalytic hydrogen evolution. <b>2021</b> , 404, 126533	35
196	Enhanced performance for photocatalytic hydrogen evolution using MoS <sub>2</sub> /graphene hybrids. <b>2021</b> , 46, 5938-5948	8
195	Transition metal dichalcogenide-based mixed-dimensional heterostructures for visible-light-driven photocatalysis: Dimensionality and interface engineering. <b>2021</b> , 14, 2003-2022	20
194	Synergic effect of Cu <sub>2</sub> O/MoS <sub>2</sub> /rGO for the sonophotocatalytic degradation of tetracycline and ciprofloxacin antibiotics. <b>2021</b> , 47, 4226-4237	14
193	Photo-augmented PHB production from CO or fructose by <i>Cupriavidus necator</i> and shape-optimized CdS nanorods. <b>2021</b> , 753, 142050	19
192	Efficient Visible Light Driven Ammonia Synthesis on Sandwich Structured C <sub>3</sub> N <sub>4</sub> /MoS <sub>2</sub> /Mn <sub>3</sub> O <sub>4</sub> catalyst. <b>2021</b> , 281, 119476	14
191	Solar-Driven Photocatalytic Disinfection Over 2D Semiconductors: The Generation and Effects of Reactive Oxygen Species. <b>2021</b> , 5, 2000594	5
190	Crown-like Zn <sub>0.5</sub> Cd <sub>0.5</sub> S/M-TiO <sub>2</sub> composites derived from metal-organic frameworks for photocatalytic hydrogen production. <b>2021</b> , 46, 2156-2165	4
189	Two-dimensional MXene-based and MXene-derived photocatalysts: Recent developments and perspectives. <b>2021</b> , 409, 128099	69
188	Stacking design in photocatalysis: synergizing cocatalyst roles and anti-corrosion functions of metallic MoS <sub>2</sub> and graphene for remarkable hydrogen evolution over CdS. <b>2021</b> , 9, 1552-1562	15
187	Efficient visible-light-driven H <sub>2</sub> evolution induced by P-doped Cd <sub>1-x</sub> Zn <sub>x</sub> S porous nano-spheres decorated with Ni <sub>2</sub> P and reduced graphene oxide. <b>2021</b> , 542, 148542	5
186	Nanocarbon-Enhanced 2D Photoelectrodes: A New Paradigm in Photoelectrochemical Water Splitting. <b>2020</b> , 13, 24	28
185	Enhanced photo-induced carrier separation of CdS/MoS <sub>2</sub> via micro-potential of Mo microsheet derived from electromagnetic induction. <b>2021</b> , 404, 126972	5
184	Recent progress on visible active nanostructured energy materials for water split generated hydrogen. <b>2021</b> , 11, 69-92	2
183	Unraveling MoS and Transition Metal Dichalcogenides as Functional Zinc-Ion Battery Cathode: A Perspective.. <b>2021</b> , 5, e2000815	24
182	Strategies to improve electrocatalytic and photocatalytic performance of two-dimensional materials for hydrogen evolution reaction. <b>2021</b> , 42, 511-556	57

181	Probing nanostructure MoS <sub>2</sub> as catalyst in light activated and electro activated hydrogen evolution reaction. <b>2021</b> , 45, 4671-4676	1
180	Cobalt ion redox and conductive polymers boosted the photocatalytic activity of the graphite carbon nitride-Co <sub>3</sub> O <sub>4</sub> Z-scheme heterostructure. <b>2021</b> , 45, 162-168	3
179	Integration of redox cocatalysts for artificial photosynthesis.	21
178	Facile two-step synthesis of nanofiber polyaniline/graphene/cuprous oxide composite with enhanced photocatalytic performance. <b>2021</b> , 11, 983-993	2
177	Graphitic carbon nitride-based metal-free photocatalyst. <b>2021</b> , 449-484	0
176	High-performance SERS substrate based on perovskite quantum dot/graphene/nano-Au composites for ultrasensitive detection of rhodamine 6G and p-nitrophenol.	5
175	Tuning the interfacial electronic structure via Au clusters for boosting photocatalytic H <sub>2</sub> evolution. <b>2021</b> , 9, 1759-1769	9
174	Current progress on 3D graphene-based photocatalysts: From synthesis to photocatalytic hydrogen production. <b>2021</b> , 46, 9324-9340	16
173	Electrochemically Exfoliated Platinum Dichalcogenide Atomic Layers for High-Performance Air-Stable Infrared Photodetectors. <b>2021</b> , 13, 8518-8527	9
172	Molecular-Level Control of the Intersheet Distance and Electronic Coupling between 2D Semiconducting and Metallic Nanosheets: Establishing Design Rules for High-Performance Hybrid Photocatalysts. <b>2021</b> , 8, 2004530	5
171	Preparation of CdS/Se-MoS Heterostructures via Cation Exchange of Pre-Epitaxially Synthesized Cu S/Se-MoS for Photocatalytic Hydrogen Evolution. <b>2021</b> , 17, e2006135	2
170	Two-Dimensional MoS <sub>2</sub> : Structural Properties, Synthesis Methods, and Regulation Strategies toward Oxygen Reduction. <b>2021</b> , 12,	12
169	Carrier dynamics of CdS/MoS <sub>2</sub> heterostructure nanocrystal films affected by annealing effect. <b>2021</b> , 23, 1	0
168	Contrary Effect of B and N Doping into Graphene and Graphene Oxide Heterostructures with MoS <sub>2</sub> on Interface Function and Hydrogen Evolution. <b>2021</b> , 125, 6611-6618	2
167	Enhanced solar-to-chemical energy conversion of graphitic carbon nitride by two-dimensional cocatalysts. <b>2021</b> , 3, 100051	45
166	CdS/MoS <sub>2</sub> Nanoparticles on Nanoribbon Heterostructures with Boosted Photocatalytic H <sub>2</sub> Evolution under Visible-light Irradiation. <b>2021</b> , 6, 2561-2568	4
165	Hierarchical 0D NiSe <sub>2</sub> /2D ZnIn <sub>2</sub> S <sub>4</sub> Nanosheet-Assembled Microflowers for Enhanced Photocatalytic Hydrogen Evolution. <b>2021</b> , 8, 2100052	12
164	Anions-Exchange-Induced Efficient Carrier Transport at CsPbBr <sub>x</sub> Cl <sub>3-x</sub> /TiO <sub>2</sub> Interface for Photocatalytic Activation of C(sp <sup>3</sup> )-H bond in Toluene Oxidation. <b>2021</b> , 13, 2592-2598	5

163	Graphene-Based Nanomaterials as the Cathode for Lithium-Sulfur Batteries. <b>2021</b> , 26,	5
162	SnS <sub>2</sub> /TiO <sub>2</sub> Nanocomposites for Hydrogen Production and Photodegradation under Extended Solar Irradiation. <b>2021</b> , 11, 589	9
161	Electronic Structure, Optical Properties, and Potential Applications of n-BN/WS <sub>2</sub> (n = 1 to 4) Heterostructures. <b>2021</b> , 50, 4696-4704	1
160	In situ deposition of CdS on MoS <sub>2</sub> /rGO-based nanocomposites for highly efficient photocatalytic H <sub>2</sub> evolution reaction with visible light. <b>2021</b> , 96, 2390	
159	Pristine hexagonal CdS assembled with NiV LDH nanosheet formed p-n heterojunction for efficient photocatalytic hydrogen evolution. <b>2021</b> , 548, 149212	23
158	In-situ growth of few-layer graphene on ZnO with intimate interfacial contact for enhanced photocatalytic CO <sub>2</sub> reduction activity. <b>2021</b> , 411, 128501	40
157	Roles of sulfur-edge sites, metal-edge sites, terrace sites, and defects in metal sulfides for photocatalysis. <b>2021</b> , 1, 44-68	29
156	Engineering two-dimensional metal oxides and chalcogenides for enhanced electro- and photocatalysis. <b>2021</b> , 66, 1228-1252	33
155	Anisotropic strain effect on structural and electronic properties in WSe <sub>2</sub> /ZnO mixed-dimensional heterostructure. <b>2021</b> , 551, 149378	1
154	Pyramidal CdS Polyhedron Modified with NiAl LDH to Form S-scheme Heterojunction for Efficient Photocatalytic Hydrogen Evolution. <b>2021</b> , 13, 3525-3535	5
153	Improved Photoelectrochemical Performance of MoS through Morphology-Controlled Chemical Vapor Deposition Growth on Graphene. <b>2021</b> , 11,	4
152	Development of RGO@MoS <sub>2</sub> @Ag ternary nanocomposites with tunable geometry structure for recyclable SERS detection. <b>2021</b> , 339, 129856	17
151	Constructing an Acidic Microenvironment by MoS in Heterogeneous Fenton Reaction for Pollutant Control. <b>2021</b> , 60, 17155-17163	57
150	Facile synthesis of self-organized single crystalline TiOF <sub>2</sub> nanotubes for photocatalytic hydrogen evolution. <b>2021</b> , 117, 106627	2
149	In situ growth of vertically aligned ultrathin MoS <sub>2</sub> on porous g-C <sub>3</sub> N <sub>4</sub> for efficient photocatalytic hydrogen production. <b>2021</b> , 554, 149617	11
148	Constructing an Acidic Microenvironment by MoS <sub>2</sub> in Heterogeneous Fenton Reaction for Pollutant Control. <b>2021</b> , 133, 17292-17300	8
147	Unique hollow heterostructured CdS/Cd <sub>0.5</sub> Zn <sub>0.5</sub> S-Mo <sub>1-x</sub> W <sub>x</sub> S <sub>2</sub> : Highly-improved visible-light-driven H <sub>2</sub> generation via synergy of Cd <sub>0.5</sub> Zn <sub>0.5</sub> S protective shell and defect-rich Mo <sub>1-x</sub> W <sub>x</sub> S <sub>2</sub> cocatalyst. 1	3
146	Edge-Rich Bicrystalline 1T/2H-MoS Cocatalyst-Decorated {110} Terminated CeO Nanorods for Photocatalytic Hydrogen Evolution. <b>2021</b> , 13, 35818-35827	26



145	Construction of visible-light driven BiMoO-rGO-TiO photocatalyst for effective ofloxacin degradation. <b>2021</b> , 199, 111261	10
144	Effective visible light-driven ternary composite of ZnO nanorod decorated Bi <sub>2</sub> MoO <sub>6</sub> in rGO for reduction of hexavalent chromium. <b>2021</b> , 9, 105467	5
143	Designing Efficient MoS <sub>2</sub> /g-C <sub>3</sub> N <sub>4</sub> Hybrid Photocatalysts by Regulating the Interlayer Spacing of MoS <sub>2</sub> . <b>2021</b> , 2021, 3719-3726	0
142	Synergism of tellurium-rich structure and amorphization of NiTe <sub>1+</sub> nanodots for efficient photocatalytic H <sub>2</sub> -evolution of TiO <sub>2</sub> . <b>2021</b> , 290, 120057	20
141	Synthesis and Application in Photocatalytic Hydrogen Production of Layered MoS <sub>2</sub> . <b>2021</b> , 837, 012007	
140	Facile preparation of metallic 1T phase molybdenum selenide as cocatalyst coupled with graphitic carbon nitride for enhanced photocatalytic H <sub>2</sub> production. <b>2021</b> , 598, 172-180	36
139	Nickel clusters accelerating hierarchical zinc indium sulfide nanoflowers for unprecedented visible-light hydrogen production. <b>2022</b> , 608, 504-512	2
138	In situ growth of a-few-layered MoS <sub>2</sub> on CdS nanorod for high efficient photocatalytic H <sub>2</sub> production. <b>2021</b> , 15, 752	0
137	Simple-Stirred-Heterolayered MoS <sub>2</sub> /Graphene Nanosheets for Zn-Air Batteries.	3
136	A novel noble-metal-free binary and ternary In <sub>2</sub> S <sub>3</sub> photocatalyst with WC and W-Mo auxiliary pairs for highly-efficient visible-light hydrogen evolution. <b>2021</b> , 875, 160058	9
135	Metal-free tellurene cocatalyst with tunable bandgap for enhanced photocatalytic hydrogen production. <b>2021</b> , 21, 100720	8
134	Synthesis and characterization of composite catalysts comprised of ZnO/MoS <sub>2</sub> /rGO for photocatalytic decolorization of BR 18 dye. <b>2021</b> , 626, 126945	3
133	Nitrogenated CQD decorated ZnO nanorods towards rapid photodegradation of rhodamine B: A combined experimental and theoretical approach. <b>2021</b> , 563, 150315	4
132	Excited state absorption induced optical limiting action of MoS <sub>2</sub> -rGO nanocomposites. <b>2021</b> , 341, 117337	1
131	State-of-the-art progress in the rational design of layered double hydroxide based photocatalysts for photocatalytic and photoelectrochemical H <sub>2</sub> /O <sub>2</sub> production. <b>2021</b> , 446, 214103	11
130	Latest progress on the key operating parameters affecting the photocatalytic activity of TiO <sub>2</sub> -based photocatalysts for hydrogen fuel production: A comprehensive review. <b>2021</b> , 303, 121207	20
129	Construction of dual-Z-scheme WS <sub>2</sub> -WO <sub>3</sub> /H <sub>2</sub> O/g-C <sub>3</sub> N <sub>4</sub> catalyst for photocatalytic H <sub>2</sub> evolution under visible light. <b>2021</b> , 426, 130822	10
128	Preparation and application of 0D-2D nanomaterial hybrid heterostructures for energy applications. <b>2021</b> , 12, 100169	5

127	Molybdenum sulfide cocatalyst activation upon photodeposition of cobalt for improved photocatalytic hydrogen production activity of ZnCdS. <b>2021</b> , 425, 131478	11
126	Perovskite-type lanthanum ferrite based photocatalysts: Preparation, properties, and applications. <b>2022</b> , 66, 314-338	21
125	Gel-assisted synthesis of CIZS for visible-light photocatalytic reduction reaction. <b>2022</b> , 429, 132364	2
124	Liquid-phase exfoliated MoS nanosheets doped with -type transition metals: a comparative analysis of photocatalytic and antimicrobial potential combined with density functional theory. <b>2021</b> , 50, 6598-6619	20
123	Increment in Photocatalytic Activity of g-C3N4 Coupled Sulphides and Oxides for Environmental Remediation. <b>2020</b> , 159-192	1
122	Solid-Solution Coordination Polymers as Precursors for ZnxCd1-xS/C Composite Nanowires. <b>2017</b> , 2017, 2444-2449	4
121	Photocatalytic oxygen evolution reaction for energy conversion and storage of functional nanomaterials. <b>2020</b> , 55-81	2
120	In situ ion exchange synthesis of MoS2/g-C3N4 heterojunctions for highly efficient hydrogen production. <b>2018</b> , 42, 910-917	33
119	Vertical MoS <sub>2</sub> /SiO <sub>2</sub> /Si and Graphene: Effect of Surface Morphology on Photoelectrochemical Properties. <b>2020</b> ,	6
118	Laser exposure induced alteration of WS <sub>2</sub> monolayers in the presence of ambient moisture. <b>2018</b> , 5, 015013	26
117	Substrate screening effects on the quasiparticle band gap and defect charge transition levels in MoS <sub>2</sub> . <b>2018</b> , 2,	43
116	Synthesis and Characterization of MoS <sub>2</sub> /Graphene-TiO <sub>2</sub> Ternary Photocatalysts for High-Efficiency Hydrogen Production under Visible Light. <b>2019</b> , 56, 284-290	19
115	Interfacial cohesive interaction and band modulation of two-dimensional MoS <sub>2</sub> /graphene heterostructure. <b>2017</b> , 66, 087101	6
114	Hydrogen adsorption mechanism on single-layer MoSe <sub>2</sub> for hydrogen evolution reaction: First-principles study. <b>2018</b> , 67, 217102	1
113	Nanostructured MoS <sub>2</sub> as Non-noble Metal-Based Cocatalyst for Photocatalytic Applications. <b>2021</b> , 591-610	1
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111	Substrate-dependent degradation of thin TMDC layers in ambient conditions. <b>2020</b> , 1695, 012197	0
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1 Impactful Role of Earth-Abundant Cocatalysts in Photocatalytic Water Splitting. **2023**, 375-409

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