Synergy of Dopants and Defects in Graphitic Carbon Nitride with Exceptionally Modulated Band Structures for Efficient Photocatalytic Oxygen Evolution

DOI: 10.1002/adma.201903545
Advanced Materials, 2019, 31, e1903545.

#	Paper	IF	Citations
447	A [001]-Oriented Hittorf's Phosphorus Nanorods/Polymeric Carbon Nitride Heterostructure for Boosting Wide-Spectrum-Responsive Photocatalytic Hydrogen Evolution from Pure Water. **2020**, 59, 868-873		100
446	A [001]-Oriented Hittorf's Phosphorus Nanorods/Polymeric Carbon Nitride Heterostructure for Boosting Wide-Spectrum-Responsive Photocatalytic Hydrogen Evolution from Pure Water. **2020**, 132, 878-883		26
445	Defect Engineering of Photocatalysts for Solar Energy Conversion. **2020**, 4, 1900487		52
444	Peroxymonosulfate enhanced photocatalytic decomposition of silver-cyanide complexes using g-C3N4 nanosheets with simultaneous recovery of silver. **2020**, 265, 118587		23
443	A hierarchical carbon nitride tube with oxygen doping and carbon defects promotes solar-to-hydrogen conversion. **2020**, 8, 3160-3167		35
442	Silver Single Atom in Carbon Nitride Catalyst for Highly Efficient Photocatalytic Hydrogen Evolution. **2020**, 132, 23312-23316		13
441	Multidimensional (0D-3D) functional nanocarbon: Promising material to strengthen the photocatalytic activity of graphitic carbon nitride. **2020**,		15
440	Intrinsic Defects in Polymeric Carbon Nitride for Photocatalysis Applications. **2020**, 15, 3405-3415		9
439	Graphitic Carbon Nitride Quantum Dots Embedded in Carbon Nanosheets for Near-Infrared Imaging-Guided Combined Photo-Chemotherapy. **2020**, 14, 13304-13315		38
438	Photo-Fenton degradation of emerging pollutants over Fe-POM nanoparticle/porous and ultrathin g-C3N4 nanosheet with rich nitrogen defect: Degradation mechanism, pathways, and products toxicity assessment. **2020**, 278, 119349		83
437	Facile Synthesis of Defect-Modified Thin-Layered and Porous g-CN with Synergetic Improvement for Photocatalytic H Production. **2020**, 12, 52603-52614		19
436	An All-Organic D-A System for Visible-Light-Driven Overall Water Splitting. **2020**, 16, e2003914		41
435	A Full Solar Light Spectrum Responsive 2OV Photocatalyst: A Synergistic Strategy for Visible-to-NIR Photon Harvesting. **2020**, 8, 13039-13047		9
434	Mesoporous Polymeric Cyanamide-Triazole-Heptazine Photocatalysts for Highly-Efficient Water Splitting. **2020**, 16, e2003162		12
433	Red Phosphorus/Carbon Nitride van der Waals Heterostructure for Photocatalytic Pure Water Splitting under Wide-Spectrum Light Irradiation. **2020**, 8, 13459-13466		24
432	CO -Assisted Fabrication of Defect-Engineered Carbon Nitride for Enhanced Electrocatalytic Hydrogen Evolution. **2020**, 15, 4113-4117		3
431	Enhanced photoresponse and fast charge transfer: three-dimensional macroporous g-C3N4/GO-TiO2 nanostructure for hydrogen evolution. **2020**, 8, 19533-19543		21

430	Silver Single Atom in Carbon Nitride Catalyst for Highly Efficient Photocatalytic Hydrogen Evolution. **2020**, 59, 23112-23116		110
429	Bandgap engineering of novel peryleno[1,12-bcd]thiophene sulfone-based conjugated co-polymers for significantly enhanced hydrogen evolution without co-catalyst. **2020**, 8, 20062-20071		10
428	Task-Specific Synthesis of 3D Porous Carbon Nitrides from the Cycloaddition Reaction and Sequential Self-Assembly Strategy toward Photocatalytic Hydrogen Evolution. **2020**, 12, 40433-40442		14
427	Functional group defect design in polymeric carbon nitride for photocatalytic application. **2020**, 8, 120703		7
426	Multifunctional 2D porous g-C3N4 nanosheets hybridized with 3D hierarchical TiO2 microflowers for selective dye adsorption, antibiotic degradation and CO2 reduction. **2020**, 396, 125347		62
425	In situ synthesis of ultrafine metallic MoO2/carbon nitride nanosheets for efficient photocatalytic hydrogen generation: a prominent cocatalytic effect. **2020**, 10, 4053-4060		5
424	Metal-Free Photocatalytic Hydrogenation Using Covalent Triazine Polymers. **2020**, 59, 14378-14382		28
423	Photocatalytic Overall Water Splitting Activity of Templateless Structured Graphitic Nanoparticles Obtained from Cyclodextrins. **2020**, 3, 6623-6632		5
422	Oxygen-Deficient Birnessite-MnO2 for High-Performing Rechargeable Aqueous Zinc-Ion Batteries. **2020**, 6, 1357-1364		11
421	In Situ Grown Single-Atom Cobalt on Polymeric Carbon Nitride with Bidentate Ligand for Efficient Photocatalytic Degradation of Refractory Antibiotics. **2020**, 16, e2001634		118
420	Nitrogen-deficient g-CN/POMs porous nanosheets with P-N heterojunctions capable of the efficient photocatalytic degradation of ciprofloxacin. **2020**, 259, 127465		15
419	Metal-Free Photocatalytic Hydrogenation Using Covalent Triazine Polymers. **2020**, 132, 14484-14488		4
418	Adsorption behavior of CO, CO2, H2, H2O, NO, and O2 on pristine and defective 2D monolayer ferromagnetic Fe3GeTe2. **2020**, 527, 146894		12
417	Heterogeneous Single-Atom Photocatalysts: Fundamentals and Applications. **2020**, 120, 12175-12216		269
416	Hydrogen Generation by Solar Water Splitting Using 2D Nanomaterials. **2020**, 4, 2000050		15
415	A Highly Crystalline Perylene Imide Polymer with the Robust Built-In Electric Field for Efficient Photocatalytic Water Oxidation. *Advanced Materials*, **2020**, 32, e1907746	24	60
414	A Promoted Charge Separation/Transfer System from Cu Single Atoms and C N Layers for Efficient Photocatalysis. *Advanced Materials*, **2020**, 32, e2003082	24	144
413	Efficient photocatalytic overall water splitting on metal-free 1D SWCNT/2D ultrathin C3N4 heterojunctions via novel non-resonant plasmonic effect. **2020**, 278, 119312		46

412	Exfoliated Graphitic Carbon Nitride Nanosheets/Gold Nanoparticles/Spherical Montmorillonite Ternary Porous Heterostructures for the Degradation of Organic Dyes. **2020**, 3, 7847-7857	16
411	N doped carbon quantum dots modified defect-rich g-C3N4 for enhanced photocatalytic combined pollutions degradation and hydrogen evolution. **2020**, 591, 124552	34
410	Two-dimensional halogen-substituted graphdiyne: first-principles investigation of mechanical, electronic, optical, and photocatalytic properties. **2020**, 55, 8220-8230	12
409	Synergy of Ni dopant and oxygen vacancies in ZnO for efficient photocatalytic depolymerization of sodium lignosulfonate. **2020**, 394, 125050	24
408	Embedding few-layer TiCT into alkalized g-CN nanosheets for efficient photocatalytic degradation. **2020**, 571, 297-306	34
407	Function-switchable metal/semiconductor junction enables efficient photocatalytic overall water splitting with selective water oxidation products. **2020**, 65, 1389-1395	20
406	Phosphorus-doped polymeric carbon nitride nanosheets for enhanced photocatalytic hydrogen production. **2020**, 8, 041108	26
405	Single-Crystal Integrated Photoanodes Based on 4-SiC Nanohole Arrays for Boosting Photoelectrochemical Water Splitting Activity. **2020**, 12, 20469-20478	5
404	Amorphous and Crystalline 2D Polymeric Carbon Nitride Nanosheets for Photocatalytic Hydrogen/Oxygen Evolution and Hydrogen Peroxide Production. **2020**, 15, 2329-2340	17
403	Low-Temperature Methane Oxidation Triggered by Peroxide Radicals over Noble-Metal-Free MgO Catalyst. **2020**, 12, 21761-21771	7
402	Controlling defects in crystalline carbon nitride to optimize photocatalytic CO reduction. **2020**, 56, 5641-5644	46
401	Thiophene-Conjugated Porous C3N4 Nanosheets for Boosted Photocatalytic Nicotinamide Cofactor Regeneration to Facilitate Solar-to-Chemical Enzymatic Reactions. **2021**, 27, 42-54	2
400	A direct Z-scheme oxygen vacant BWO/oxygen-enriched graphitic carbon nitride polymer heterojunction with enhanced photocatalytic activity. **2021**, 403, 126363	32
399	Nanoconfined fusion of g-C3N4 within edge-rich vertically oriented graphene hierarchical networks for high-performance photocatalytic hydrogen evolution utilizing superhydrophillic and superaerophobic responses in seawater. **2021**, 280, 119461	14
398	Synergy of dopants and porous structures in graphitic carbon nitride for efficient photocatalytic H2 evolution. **2021**, 47, 4043-4048	6
397	Ultrathin mesoporous g-C3N4/NH2-MIL-101(Fe) octahedron heterojunctions as efficient photo-Fenton-like system for enhanced photo-thermal effect and promoted visible-light-driven photocatalytic performance. **2021**, 537, 147890	34
396	Approach of fermi level and electron-trap level in cadmium sulfide nanorods via molybdenum doping with enhanced carrier separation for boosted photocatalytic hydrogen production. **2021**, 583, 661-671	43
395	The pivotal role of defects in fabrication of polymeric carbon nitride homojunctions with enhanced photocatalytic hydrogen evolution. **2021**, 586, 748-757	11

394	Carbon-Graphitic Carbon Nitride Hybrids for Heterogeneous Photocatalysis. **2021**, 17, e2005231		37
393	Nitrogen vacancy induced in situ g-CN p-n homojunction for boosting visible light-driven hydrogen evolution. **2021**, 587, 110-120		40
392	Biosensors based on fluorescence carbon nanomaterials for detection of pesticides. **2021**, 134, 116126		41
391	The synergy of thermal exfoliation and phosphorus doping in g-C3N4 for improved photocatalytic H2 generation. **2021**, 46, 3595-3604		11
390	C-, N-Vacancy defect engineered polymeric carbon nitride towards photocatalysis: viewpoints and challenges. **2021**, 9, 111-153		151
389	Employing one-step coupling cold plasma and thermal polymerization approach to construct nitrogen defect-rich carbon nitrides toward efficient visible-light-driven hydrogen generation. **2021** , 46, 5158-5168		1
388	Engineering Surface N-Vacancy Defects of Ultrathin Mesoporous Carbon Nitride Nanosheets as Efficient Visible-Light-Driven Photocatalysts. **2021**, 5, 2000610		11
387	Visible-Light Driven Efficient Overall H2O2 Production on Modified Graphitic Carbon Nitride under Ambient Conditions. **2021**, 285, 119726		19
386	An enhanced photoelectrochemical ofloxacin aptasensor using NiFe layered double hydroxide/graphitic carbon nitride heterojunction. **2021**, 368, 137595		9
385	Transition metal/carbon hybrids for oxygen electrocatalysis in rechargeable zinc-air batteries. **2021**, 3, e12067		18
384	Atomic- and Molecular-Level Functionalizations of Polymeric Carbon Nitride for Solar Fuel Production. **2021**, 5, 2000440		5
383	Creation of carbon defects and in-plane holes with the assistance of NH4Br to enhance the photocatalytic activity of g-C3N4.		5
382	Abundant hydroxyl groups decorated on nitrogen vacancy-embedded g-C3N4 with efficient photocatalytic hydrogen evolution performance. **2021**, 11, 3914-3924		3
381	Efficient Photocatalytic Overall Water Splitting Induced by the Giant Internal Electric Field of a g-C N /rGO/PDIP Z-Scheme Heterojunction. *Advanced Materials*, **2021**, 33, e2007479	24	107
380	Robust selenium-doped carbon nitride nanotubes for selective electrocatalytic oxidation of furan compounds to maleic acid. **2021**, 12, 6342-6349		5
379	Biomolecular L-tryptophan as a hole mediator anchored on g-C3N4 exhibits remarkably enhanced photocatalytic H2 evolution. **2021**, 11, 4776-4782		6
378	Phosphorus-doped carbon nitride with grafted sulfonic acid groups for efficient photocatalytic synthesis of xylonic acid. **2021**, 23, 4150-4160		16
377	Joint connection of experiment and simulation for photocatalytic hydrogen evolution: strength, weakness, validation and complementarity. **2021**, 9, 6749-6774		3

376	Single-atom nickel terminating sp and sp nitride in polymeric carbon nitride for visible-light photocatalytic overall water splitting. **2021**, 12, 3633-3643	23
375	High carrier separation efficiency for a defective g-C3N4 with polarization effect and defect engineering: mechanism, properties and prospects. **2021**, 11, 5432-5447	6
374	Bidirectional Progressive Optimization of Carbon and Nitrogen Defects in Solar-Driven Regenerable Adsorbent to Remove UV-Filters from Water. **2021**, 1, 456-466	8
373	Self-assembly of a g-C3N4-based 3D aerogel induced by N-modified carbon dots for enhanced photocatalytic hydrogen production.	5
372	Unraveling fundamental active units in carbon nitride for photocatalytic oxidation reactions. **2021**, 12, 320	55
371	PI/g-C3N4 composite photocatalyst with enhanced activity of degrading pollutants under visible light. **2021**, 56, 9122-9133	3
370	Controllable Generation of Reactive Oxygen Species on Cyano-Group-Modified Carbon Nitride for Selective Epoxidation of Styrene. **2021**, 2, 100089	7
369	Porous Carbon Nitride Thin Strip: Precise Carbon Doping Regulating Delocalized π-Electron Induces Elevated Photocatalytic Hydrogen Evolution. **2021**, 17, e2006622	26
368	Granular Polymeric Carbon Nitride with Carbon Vacancies for Enhanced Photocatalytic Hydrogen Evolution. **2021**, 5, 2000796	7
367	Controllable Approach to Carbon-Deficient and Oxygen-Doped Graphitic Carbon Nitride: Robust Photocatalyst Against Recalcitrant Organic Pollutants and the Mechanism Insight. **2021**, 31, 2010763	29
366	Boosting the Catalytic Performance by Confining Rich Carbon Atoms over Graphite Carbon Nitride Structure. **2021**, 151, 3721	
365	Amorphous Carbon Nitride with Three Coordinate Nitrogen (N3C) Vacancies for Exceptional NOx Abatement in Visible Light. **2021**, 11, 2004001	25
364	Advanced Two-Dimensional Heterojunction Photocatalysts of Stoichiometric and Non-Stoichiometric Bismuth Oxyhalides with Graphitic Carbon Nitride for Sustainable Energy and Environmental Applications. **2021**, 11, 426	19
363	Boron-doped nitrogen-deficient carbon nitride-based Z-scheme heterostructures for photocatalytic overall water splitting. **2021**, 6, 388-397	219
362	Theoretical Insights into the Limitation of Photocatalytic Overall Water Splitting Performance of VIA Group Elements Doped Polymeric Carbon Nitride: A Density Functional Theory Calculation Predicting Solar-to-Hydrogen Efficiency. **2021**, 5, 2000630	2
361	The effect of Pt cocatalyst on the performance and transient IR spectrum of photocatalytic g-C3N4 nanospheres. **2021**, 542, 148432	6
360	Derivation of Luminescent Mesoporous Silicon Nanocrystals from Biomass Rice Husks by Facile Magnesiothermic Reduction. **2021**, 11,	3
359	High-Throughput One-Photon Excitation Pathway in 0D/3D Heterojunctions for Visible-Light Driven Hydrogen Evolution. **2021**, 31, 2100816	40

358	Highly efficient photosynthesis of hydrogen peroxide in ambient conditions. **2021**, 118,	18
357	Surface plasmon mediates the visible light-responsive lithium-oxygen battery with Au nanoparticles on defective carbon nitride. **2021**, 118,	24
356	Advancing Graphitic Carbon Nitride-Based Photocatalysts toward Broadband Solar Energy Harvesting. **2021**, 3, 663-697	21
355	Engineered Graphitic Carbon Nitride-Based Photocatalysts for Visible-Light-Driven Water Splitting: A Review. **2021**, 35, 6504-6526	46
354	Point-Defect Engineering: Leveraging Imperfections in Graphitic Carbon Nitride (g-C N) Photocatalysts toward Artificial Photosynthesis. **2021**, 17, e2006851	49
353	Carbon Defects Induced Delocalization of Electrons Enables Efficient Charge Separation in Graphitic Carbon Nitride for Increased Photocatalytic H2 Generation. 1	0
352	An Inclusive Review on Recent Advancements of Cadmium Sulfide Nanostructures and its Hybrids for Photocatalytic and Electrocatalytic Applications. **2021**, 508, 111575	3
351	Foamer-Derived Bulk Nitrogen Defects and Oxygen-Doped Porous Carbon Nitride with Greatly Extended Visible-Light Response and Efficient Photocatalytic Activity. **2021**, 13, 23866-23876	8
350	CoO @Co-NC Catalyst with Dual Active Centers for Enhanced Oxygen Evolution: Breaking Trade-Off of Particle Size and Metal Loading. **2021**, 27, 10657-10665	1
349	Conformal Macroporous Inverse Opal Oxynitride-Based Photoanode for Robust Photoelectrochemical Water Splitting. **2021**, 143, 7402-7413	28
348	A highly efficient photocatalyst based on layered g-C3N4/SnS2 composites. **2021**, 17,	
347	Controlled Synthesis of Nitro-Terminated Poly[2-(3-thienyl)-ethanol]/g-C3N4 Nanosheet Heterojunctions for Efficient Visible-Light Photocatalytic Hydrogen Evolution. **2021**, 9, 7306-7317	5
346	A dual strategy for synthesizing carbon/defect comodified polymeric carbon nitride porous nanotubes with boosted photocatalytic hydrogen evolution and synchronous contaminant degradation. **2021**, 287, 119995	31
345	Pathways towards Boosting Solar-Driven Hydrogen Evolution of Conjugated Polymers. **2021**, 17, e2007576	9
344	A Review of MOFs and Their Composites-Based Photocatalysts: Synthesis and Applications. **2021**, 31, 2104231	50
343	Amorphous B-doped graphitic carbon nitride quantum dots with high photoluminescence quantum yield of near 90% and their sensitive detection of Fe2+/Cd2+. 1	3
342	Construction of Few-Layer Ti3C2 MXene and Boron-Doped g-C3N4 for Enhanced Photocatalytic CO2 Reduction. **2021**, 9, 8425-8434	15
341	Photoelectrochemical Water-Splitting Using CuO-Based Electrodes for Hydrogen Production: A Review. *Advanced Materials*, **2021**, 33, e2007285	24 26

340	2D Amorphous CoO Incorporated g-C3N4 Nanotubes for Improved Photocatalytic Performance. **2021**, 15, 2100254		2
339	Directional transfer of photo-generated charges mediated by cascaded dual defects in ternary photocatalyst ZnS/ZnO-In2O3 with enhanced photocatalytic performance. **2021**, 416, 129159		16
338	Designed polymeric conjugation motivates tunable activation of molecular oxygen in heterogeneous organic photosynthesis. **2021**, 67, 61-61		14
337	Na-Doped Graphitic Carbon Nitride for Removal of Aqueous Contaminants via Adsorption and Photodegradation. **2021**, 4, 7746-7757		2
336	Carrier engineering of carbon nitride boosts visible-light photocatalytic hydrogen evolution. **2021**, 179, 80-88		6
335	Boosting photocatalytic hydrogen evolution of g-C3N4 catalyst via lowering the Fermi level of co-catalyst. 1		6
334	Supercritical CO2-Tailored 2D Oxygen-doped Amorphous Carbon Nitride for Enhanced Photocatalytic Activity.		2
333	Vacancy engineered polymeric carbon nitride nanosheets for enhanced photoredox catalytic efficiency. **2021**, 100491		4
332	Synergistic Effect of K and I Codoped Porous Graphitic Carbon Nitride Sphere for Photocatalytic Hydrogen Evolution: Experimental and Theoretical Study. **2021**, 5, 2100292		2
331	Efficient photoactivation of peroxymonosulfate by Z-scheme nitrogen-defect-rich NiCoO/g-CN for rapid emerging pollutants degradation. **2021**, 414, 125528		18
330	Spatial distribution of ZnIn2S4 nanosheets on g-C3N4 microtubes promotes photocatalytic CO2 reduction. **2021**, 418, 129476		31
329	Novel dual-effective Z-scheme heterojunction with g-C3N4, Ti3C2 MXene and black phosphorus for improving visible light-induced degradation of ciprofloxacin. **2021**, 291, 120105		44
328	Simultaneously Tuning Band Structure and Oxygen Reduction Pathway toward High-Efficient Photocatalytic Hydrogen Peroxide Production Using Cyano-Rich Graphitic Carbon Nitride. **2021**, 31, 2105731		19
327	Homogeneous Carbon/Potassium-Incorporation Strategy for Synthesizing Red Polymeric Carbon Nitride Capable of Near-Infrared Photocatalytic H Production. *Advanced Materials*, **2021**, 33, e2101455	24	30
326	Photodepositing CdS on the Active Cyano Groups Decorated g-C N in Z-Scheme Manner Promotes Visible-Light-Driven Hydrogen Evolution. **2021**, 17, e2102699		12
325	Efficient hydrogen production in a spotlight reactor with plate photocatalyst of TiO2/NiO heterojunction supported on nickel foam. **2021**, 228, 120578		6
324	Modification of graphitic carbon nitride by elemental boron cocatalyst with high-efficient charge transfer and photothermal conversion. **2021**, 417, 129203		11
323	Disordered nitrogen-defect-rich porous carbon nitride photocatalyst for highly efficient H2 evolution under visible-light irradiation. **2021**, 181, 193-203		29

322	Comparative insight into effect of hybridizing potassium and hydrogen ions on photocatalytic Reduction/Oxidization behavior of g-C3N4 nanocrystals. **2021**, 417, 129187	6
321	Dopant and Defect Doubly Modified CeO2/g-C3N4 Nanosheets as 0D/2D Z-Scheme Heterojunctions for Photocatalytic Hydrogen Evolution: Experimental and Density Functional Theory Studies. **2021**, 9, 11479-11492	3
320	A Bibendum-like structure of carbon nitride microtubes with regular arrangement nanotubes for photocatalytic protons reduction. **2021**, 21, 100767	4
319	Isotype junctioned nanotubes and nanosheets of g-C3N4 for enhanced visible-light driven photocatalytic H2O2 production. **2021**, 36, 3495	1
318	Photocatalytic nitrogen reduction to ammonia: Insights into the role of defect engineering in photocatalysts. 1	10
317	Ultrathin Crystalline Covalent-Triazine-Framework Nanosheets with Electron Donor Groups for Synergistically Enhanced Photocatalytic Water Splitting.	3
316	Iodide-Induced Fragmentation of Polymerized Hydrophilic Carbon Nitride for High-Performance Quasi-Homogeneous Photocatalytic H O Production. **2021**, 60, 25546-25550	43
315	Noble-Metal-Free NixSy-C3N5 Hybrid Nanosheet with Highly Efficient Photocatalytic Performance. **2021**, 11, 1089	1
314	One-step fabrication of nitrogen-deficient carbon nitride through pyrolysis of melamine and 1,2,4-triazole for its enhanced photocatalytic degradation. **2021**, 2, 317-326	0
313	Ultrathin Crystalline Covalent-Triazine-Framework Nanosheets with Electron Donor Groups for Synergistically Enhanced Photocatalytic Water Splitting. **2021**, 60, 25381-25390	23
312	Photocatalytic water purification with graphitic C3N4-based composites: Enhancement, mechanisms, and performance. **2021**, 24, 101118	4
311	Highly efficient photocatalytic degradation of organic pollutants by mesoporous graphitic carbon nitride bonded with cyano groups. **2021**, 419, 129503	11
310	Insights into the photocatalytic peroxymonosulfate activation over defective boron-doped carbon nitride for efficient pollutants degradation. **2021**, 418, 126338	4
309	Reveal Brønsted–Evans–Polanyi relation and attack mechanisms of reactive oxygen species for photocatalytic H2O2 production. **2021**, 120757	6
308	High-quality graphitic carbon nitride films prepared by close-spaced thermal copolymerization for photoelectrochemical application.	2
307	Sacrificial Reagent Free Photocatalytic Oxygen Evolution over CeF3/β-FeOOH Nanohybrid. **2021**, 8, 2101161	1
306	Constructing a Z-scheme ZnInS-S/CNTs/RP nanocomposite with modulated energy band alignment for enhanced photocatalytic hydrogen evolution. **2022**, 608, 482-492	4
305	Alkali and donor–acceptor bridged three-dimensional interpenetrating polymer networks boost photocatalytic performance by efficient electron delocalization and charge transfer. **2021**, 292, 120153	6

304	Iodide-Induced Fragmentation of Polymerized Hydrophilic Carbon Nitride for High-Performance Quasi-Homogeneous Photocatalytic H2O2 Production.	2
303	Atomically Dispersed s-Block Magnesium Sites for Electroreduction of CO2 to CO. **2021**, 133, 25445	4
302	Expanding the Conjugate Structure of Polymeric Carbon Nitride for Enhanced Light Absorption and Photothermal Conversion. **2021**, 42, e2100502	1
301	Atomically Dispersed s-Block Magnesium Sites for Electroreduction of CO to CO. **2021**, 60, 25241-25245	21
300	In-situ construction of morphology-controllable 0D/1D g-C3N4 homojunction with enhanced photocatalytic activity. **2021**, 563, 150317	7
299	Defect engineering in polymeric carbon nitride photocatalyst: Synthesis, properties and characterizations. **2021**, 296, 102523	9
298	Efficient solar light facilitated photo-oxidative detoxification of gaseous 2-chloroethyl ethyl sulfide on ZrO-doped g-CN under dry and humid air. **2021**, 280, 130685	4
297	Single tungsten atom steered band-gap engineering for graphitic carbon nitride ultrathin nanosheets boosts visible-light photocatalytic H2 evolution. **2021**, 424, 130004	9
296	Bridging regulation in graphitic carbon nitride for band-structure modulation and directional charge transfer towards efficient H evolution under visible-light irradiation. **2021**, 601, 220-228	5
295	Engineering of graphitic carbon nitride with simultaneous potassium doping sites and nitrogen defects for notably enhanced photocatalytic oxidation performance. **2021**, 796, 148946	6
294	Ti3C2 MXene-induced interface electron separation in g-C3N4/Ti3C2 MXene/MoSe2 Z-scheme heterojunction for enhancing visible light-irradiated enoxacin degradation. **2021**, 275, 119194	10
293	Highly efficient g-C3N4 supported ruthenium catalysts for the catalytic transfer hydrogenation of levulinic acid to liquid fuel γ-valerolactone. **2021**, 177, 652-662	8
292	Cu-O-incorporation design for promoted heterogeneous catalysis: synergistic effect of surface adsorption and catalysis towards efficient bisphenol A removal. **2021**, 569, 151107	2
291	Structural reconstruction of carbon nitride with tailored electronic structure: A bifunctional photocatalyst for cooperative artificial photosynthesis and selective phenylcarbinol oxidation. **2021**, 298, 120517	4
290	Superhydrophilic and polyporous nanofibrous membrane with excellent photocatalytic activity and recyclability for wastewater remediation under visible light irradiation. **2022**, 427, 131685	6
289	Renewable biomass-derived carbon-supported g-CN doped with Ag for enhanced photocatalytic reduction of CO. **2022**, 606, 1311-1321	8
288	Tube wall delamination engineering induces photogenerated carrier separation to achieve photocatalytic performance improvement of tubular g-CN. **2022**, 424, 127177	17
287	Fast and lasting electron transfer between β-FeOOH and g-C3N4/kaolinite containing N vacancies for enhanced visible-light-assisted peroxymonosulfate activation. **2022**, 429, 132374	9

286	Regulation on polymerization degree and surface feature in graphitic carbon nitride towards efficient photocatalytic H2 evolution under visible-light irradiation. **2022**, 98, 160-168		16
285	Defective polymeric carbon nitride: Fabrications, photocatalytic applications and perspectives. **2022**, 427, 130991		14
284	Bifunctional template-mediated synthesis of porous ordered g-C3N4 decorated with potassium and cyano groups for effective photocatalytic H2O2 evolution from dual-electron O2 reduction. **2022**, 427, 132032		10
283	Urea-induced supramolecular self-assembly strategy to synthesize wrinkled porous carbon nitride nanosheets for highly-efficient visible-light photocatalytic degradation.. **2021**, 11, 23459-23470		2
282	Strengthening reactive metal□support interaction to stabilize Ni species on the nitrogen vacancies of g-C3N4 for boosting photocatalytic H2 production.		5
281	A hierarchical heterojunction polymer aerogel for accelerating charge transfer and separation. **2021**, 9, 7881-7887		5
280	Vacancy engineering in nanostructured semiconductors for enhancing photocatalysis. **2021**, 9, 17143-17172		16
279	Au nanoparticle-controlled formation of metallic and oxidized Pt nanoparticles on graphitic carbon nitride nanosheets for H evolution. **2021**, 50, 9529-9539		1
278	High crystallinity and conjugation promote the polarization degree in O-doped g-C3N4 for removing organic pollutants. **2021**, 23, 1366-1376		7
277	Generalized Synthetic Strategy for Amorphous Transition Metal Oxides-Based 2D Heterojunctions with Superb Photocatalytic Hydrogen and Oxygen Evolution. **2021**, 31, 2009230		45
276	In-plane coupling electric field driving charge directional transfer for highly efficient H2 bubble evolution. **2020**, 396, 125365		19
275	Steering Hole Transfer from the Light Absorber to Oxygen Evolution Sites for Photocatalytic Overall Water Splitting. 2101158		0
274	Frustrated Lewis Pairs Constructed on 2D Amorphous Carbon Nitride for High-Selective Photocatalytic CO2 Reduction to CH4. **2021**, 5, 2100673		2
273	Self-Supporting 3D Carbon Nitride with Tunable n -□ Electronic Transition for Enhanced Solar Hydrogen Production. *Advanced Materials*, **2021**, 33, e2104361	24	15
272	Graphitic carbon nitride nanosheets via acid pretreatments for promoted photocatalysis toward degradation of organic pollutants. **2021**, 608, 1334-1347		3
271	Synergistic Modulation of the Separation of Photo-Generated Carries via Engineering of Dual Atomic Sites for Promoting Photocatalytic Performance. *Advanced Materials*, **2021**, e2105904	24	26
270	Gradient Zn-Doped Poly Heptazine Imides Integrated with a van der Waals Homojunction Boosting Visible Light-Driven Water Oxidation Activities. 13463-13471		10
269	Sulfur-Deficient ZnIn2S4/Oxygen-Deficient WO3 Hybrids with Carbon Layer Bridges as a Novel Photothermal/Photocatalytic Integrated System for Z-Scheme Overall Water Splitting. **2021**, 11, 2102452		11

268	Band structure-controlled P-C3N4 for photocatalytic water splitting via appropriately decreasing oxidation capacity. **2021**, 895, 162513		0
267	Edge electronic vacancy on ultrathin carbon nitride nanosheets anchoring O2 to boost H2O2 photoproduction. **2021**, 302, 120845		6
266	Defect Engineering in Photocatalytic Methane Conversion. 2100147		8
265	Energy band matching WO3/B-doped g-C3N4 Z-scheme photocatalyst to fix nitrogen effectively. **2021**, 127830		6
264	Efficient degradation of tetracycline in real water systems by metal-free g-C3N4 microsphere through visible-light catalysis and PMS activation synergy. **2022**, 280, 119864		7
263	Metal-free four-in-one modification of g-C3N4 for superior photocatalytic CO2 reduction and H2 evolution. **2022**, 430, 132853		7
262	A host□guest self-assembly strategy to enhance □electron densities in ultrathin porous carbon nitride nanocages toward highly efficient hydrogen evolution. **2022**, 430, 132880		7
261	Donor-Acceptor structural polymeric carbon nitride with in-plane electric field accelerating charge separation for efficient photocatalytic hydrogen evolution. **2022**, 430, 132725		4
260	Comparison of Intrinsic and Extrinsic Deficiencies. **2021**, 349-363		
259	Infrared-to-visible energy transfer photocatalysis over black phosphorus quantum dots/carbon nitride. **2021**, 133453		1
258	Fully Condensed Poly (Triazine Imide) Crystals: Extended □Conjugation and Structural Defects for Overall Water Splitting.		2
257	Fully Condensed Poly (Triazine Imide) Crystals: Extended □Conjugation and Structural Defects for Overall Water Splitting. **2021**,		11
256	FeOOH photo-deposited perylene linear polymer with accelerated charge separation for photocatalytic overall water splitting. **2022**, 65, 170		3
255	Selective oxidation of glucose to gluconic acid and glucaric acid with chlorin e6 modified carbon nitride as metal-free photocatalyst. **2021**, 120895		12
254	Regulating the *OCCHO intermediate pathway towards highly selective photocatalytic CO2 reduction to CH3CHO over locally crystallized carbon nitride.		14
253	Nitrogen defects/boron dopants engineered tubular carbon nitride for efficient tetracycline hydrochloride photodegradation and hydrogen evolution. **2022**, 303, 120932		20
252	Plasmon Ag/Na-doped defective graphite carbon nitride/NiFe layered double hydroxides Z-scheme heterojunctions toward optimized photothermal-photocatalytic-Fenton performance. **2022**, 304, 120969		9
251	Rational Design of Covalent Heptazine Frameworks with Spatially Separated Redox Centers for High-Efficiency Photocatalytic Hydrogen Peroxide Production. *Advanced Materials*, **2021**, e2107480	24	10

250	High-Efficiency and Stable Li-CO Battery Enabled by Carbon Nanotube/Carbon Nitride Heterostructured Photocathode. **2021**,	3
249	Synergistic effect of KCl mixing and melamine/urea mixture in the synthesis of g-C3N4 for photocatalytic removal of tetracycline. **2021**, 107, 118-118	2
248	High-Efficiency and Stable Li-CO2 Battery Enabled by Carbon Nanotube/Carbon Nitride Heterostructured Photocathode.	
247	Boosting photocatalytic hydrogen production by creating isotype heterojunctions and single-atom active sites in highly-crystallized carbon nitride. **2021**,	1
246	Dual Photo- and Mechanochromisms of Graphitic Carbon Nitride/Polyvinyl Alcohol Film. 2110285	0
245	Plasma-Tuned nitrogen vacancy graphitic carbon nitride sphere for efficient photocatalytic HO production. **2021**, 609, 75-85	3
244	Self-assembled graphitic carbon nitride regulated by carbon quantum dots with optimized electronic band structure for enhanced photocatalytic degradation of diclofenac. **2021**, 431, 133927	4
243	DMAP molecule grafting on a carbon nitride heptazine ring for the better degradation of pollutants the synergy of electron withdrawing and steric hindrance effects. **2021**, 11, 8014-8025	0
242	Highly dispersed Ag nanoparticles in situ creating rich cyano defects in carbon nitride for efficient photocatalytic H2 production. **2021**, 45, 22039-22043	0
241	Single-atom cobalt-hydroxyl modification of polymeric carbon nitride for highly enhanced photocatalytic water oxidation: ball milling increased single atom loading.. **2022**, 13, 754-762	5
240	Synergistic effect of nitrogen vacancy on ultrathin graphitic carbon nitride porous nanosheets for highly efficient photocatalytic H2 evolution. **2022**, 431, 134101	14
239	Roles of Zn single atom over carbon nitride-based heterojunction in boosting photogenerated carrier transfer. **2022**, 285, 120404	1
238	Enhanced light harvesting and charge separation of carbon and oxygen co-doped carbon nitride as excellent photocatalyst for hydrogen evolution reaction.. **2021**, 612, 367-376	1
237	Insights into mechanism of Fe-dominated active sites via phosphorus bridging in Fe-Ni bimetal single atom photocatalysts. **2022**, 286, 120443	2
236	The bifunctional Lewis acid site improved reactive oxygen species production: a detailed study of surface acid site modulation of TiO2 using ethanol and Br**2022**, 12, 565-571	0
235	Highly Conjugated Graphitic Carbon Nitride Nanofoam for Photocatalytic Hydrogen Evolution.. **2022**,	0
234	Precisely Tailoring Nitrogen Defects in Carbon Nitride for Efficient Photocatalytic Overall Water Splitting.. **2022**,	2
233	Tuning the Interaction between Ruthenium Single Atoms and the Second Coordination Sphere for Efficient Nitrogen Photofixation. 2112452	3

232	Understanding of the Dual Roles of Phosphorus in Atomically Distributed Fe/Co-NP over Carbon Nitride for Photocatalytic Debromination from Tetrabromobisphenol A.. **2022**,		1
231	High Photocatalytic Oxygen Evolution via Strong Built-in Electric Field induced by High Crystallinity of Perylene Imide Supramolecule.. *Advanced Materials*, **2022**, e2102354	24	5
230	Uracil-Mediated Supramolecular Assembly for C-enriched Porous Carbon Nitride with Enhanced Photocatalytic Hydrogen Evolution.		
229	Unraveling the dual defect sites in graphite carbon nitride for ultra-high photocatalytic H2O2 evolution.		20
228	Solar-powered chemistry: Engineering low-dimensional carbon nitride-based nanostructures for selective CO 2 conversion to C 1 ?C 2 products. **2022**, 4,		4
227	Excited State Properties of Layered Two-Dimensional MSi2N4 (M = Mo, Cr, and W) Materials from First-Principles Calculations. **2022**, 11, 016001		2
226	Synergistic effects on d-band center via coordination sites of M-NP (M = Co and Ni) in dual single atoms that enhances photocatalytic dechlorination from tetrachlorobispheonl A.. **2022**, 430, 128419		2
225	Photoassisted highly efficient activation of persulfate over a single-atom Cu catalyst for tetracycline degradation: Process and mechanism.. **2022**, 429, 128398		4
224	Bimetal single atom on defect-tailoring carbon nitride that boosts photocatalytic hydrogen evolution and superfast contaminant degradation. **2022**, 287, 120556		0
223	Precise carbon doping regulation of porous graphitic carbon nitride nanosheets enables elevated photocatalytic oxidation performance towards emerging organic pollutants. **2022**, 433, 134551		2
222	FeOOH coupling and nitrogen vacancies functionalized g-C3N4 heterojunction for efficient degradation of antibiotics: Performance evaluation, active species evolution and mechanism insight. **2022**, 903, 163898		4
221	Enhanced carriers separation in novel in-plane amorphous carbon/g-CN nanosheets for photocatalytic environment remediation.. **2022**, 294, 133581		0
220	Construction of Li/K dopants and cyano defects in graphitic carbon nitride for highly efficient peroxymonosulfate activation towards organic contaminants degradation.. **2022**, 294, 133700		1
219	The tremendous boost for photocatalytic properties of g-C3N4: regulation from polymerization kinetics to crystal structure engineering.		
218	On a high photocatalytic activity of high-noble alloys Au-Ag/TiO catalysts during oxygen evolution reaction of water oxidation.. **2022**, 12, 2604		3
217	Intrinsic Mechanisms of Morphological Engineering and Carbon Doping for Improved Photocatalysis of 2D/2D Carbon Nitride Van Der Waals Heterojunction.		1
216	Recent development in electronic structure tuning of graphitic carbon nitride for highly efficient photocatalysis. **2022**, 43, 021701		2
215	Photocatalytic Water-Splitting by Organic Conjugated Polymers: Opportunities and Challenges.. **2022**, e202100336		1

214	Ion-Induced Synthesis of Crystalline Carbon Nitride Ultrathin Nanosheets from Mesoporous Melon for Efficient Photocatalytic Hydrogen Evolution with Synchronous Highly Selective Oxidation of Benzyl Alcohol.. **2022**,		3
213	Shining light on ZnIn 2 S 4 photocatalysts: Promotional effects of surface and heterostructure engineering toward artificial photosynthesis.		2
212	Efficient Photocatalytic Conversion of Methane into Ethanol over P-Doped g-C3N4 under Ambient Conditions. **2022**, 36, 3929-3937		1
211	Design of polymeric carbon nitride-based heterojunctions for photocatalytic water splitting: a review. 1		3
210	Surface Modification of Two-Dimensional Photocatalysts for Solar Energy Conversion.. *Advanced Materials*, **2022**, e2200180	24	18
209	In situ growth strategy synthesis of single-atom nickel/sulfur co-doped g-C3N4 for efficient photocatalytic tetracycline degradation and CO2 reduction. **2022**, 136208		5
208	Study on TiO2/g-C3N4 S-Scheme heterojunction photocatalyst for enhanced formaldehyde decomposition. **2022**, 126, 112213		2
207	Highly efficient isomerization of glucose to fructose over a novel aluminum doped graphitic carbon nitride bifunctional catalyst. **2022**, 346, 131144		1
206	ReviewStrategic Design of Layered Double Hydroxides and Graphitic Carbon Nitride Heterostructures for Photoelectrocatalytic Water Splitting Applications.		0
205	Transition-metal-based cocatalysts for photocatalytic water splitting.		4
204	Hydrophilic bi-functional B-doped g-C3N4 hierarchical architecture for excellent photocatalytic H2O2 production and photoelectrochemical water splitting. **2022**, 70, 236-247		4
203	Leveraging doping and defect engineering to modulate exciton dissociation in graphitic carbon nitride for photocatalytic elimination of marine oil spill. **2022**, 439, 135668		0
202	Plasma-induced hierarchical amorphous carbon nitride nanostructure with two N2 C-site vacancies for photocatalytic H2O2 production. **2022**, 311, 121372		4
201	Single-atom Ir and Ru anchored on graphitic carbon nitride for efficient and stable electrocatalytic/photocatalytic hydrogen evolution. **2022**, 310, 121318		3
200	1+1>2Highly efficient removal of organic pollutants by composite nanofibrous membrane based on the synergistic effect of adsorption and photocatalysis. **2022**, 124, 76-85		3
199	Metallic Copper-Containing Composite Photocatalysts: Fundamental, Materials Design, and Photoredox Applications.. **2022**, 6, e2101001		5
198	Perylenetetracarboxylic acid nanosheets with internal electric fields and anisotropic charge migration for photocatalytic hydrogen evolution.. **2022**, 13, 2067		6
197	Constructing Interfacial Super Active Sites over OH-PCN/Nb2O5 Heterojunction for Efficient Phenol Photomineralization. **2022**,		0

196	Interlayer Palladium-Single-Atom-Coordinated Cyano-Group-Rich Graphitic Carbon Nitride for Enhanced Photocatalytic Hydrogen Production Performance. 5077-5093	7
195	Boosting photocatalytic hydrogen evolution via regulating Pt chemical states. **2022**, 442, 136334	2
194	Dual-metal Ni and Fe phthalocyanines/boron-doped g-C3N4 Z-scheme 2D-heterojuntions for visible-light selective aerobic alcohol oxidation.	3
193	Nitrogen-rich porous polymeric carbon nitride with enhanced photocatalytic activity for synergistic removal of organic and heavy metal pollutants.	
192	Micro-tailored g-C3N4 enables Ru single-atom loading for efficient photocatalytic H2 evolution. **2022**, 153471	1
191	Vacancy defect engineering in semiconductors for solar light-driven environmental remediation and sustainable energy production. **2022**, 1, 213-255	4
190	Photochemical production of hydrogen peroxide by digging pro-superoxide radical carbon vacancies in porous carbon nitride. **2022**, 100874	1
189	Carbon nitride photoelectrode prepared via a combined strategy of electrophoresis and vapor deposition. 1-7	0
188	Carbon-Doped Porous Polymeric Carbon Nitride with Enhanced Visible Light Photocatalytic and Photoelectrochemical Performance. 2200035	1
187	Atomically Dispersed Janus Nickel Sites on Red Phosphorus for Photocatalytic Overall Water Splitting.. **2022**,	8
186	Atomically Dispersed Janus Nickel Sites on Red Phosphorus for Photocatalytic Overall Water Splitting.	
185	Morphology and defects design in g-C3N4 for efficient and simultaneous visible-light photocatalytic hydrogen production and selective oxidation of benzyl alcohol. **2022**,	1
184	Bi@H-TiO2/B-C3N4 heterostructure for enhanced photocatalytic hydrogen generation activity under visible light. **2022**,	0
183	Facile construction of Fe3+/Fe2+ mediated charge transfer pathway in MIL-101 for effective tetracycline degradation. **2022**, 359, 131808	0
182	Phenyl-incorporated carbon nitride photocatalyst with extended visible-light-absorption for enhanced hydrogen production from water splitting.. **2022**, 622, 494-502	0
181	Ultrathin Porous Carbon Nitride Nanosheets with Well-tuned Band Structures via Carbon Vacancies and Oxygen Doping for Significantly Boosting H2 Production. **2022**, 121521	2
180	Spontaneous exciton dissociation in organic photocatalyst under ambient conditions for highly efficient synthesis of hydrogen peroxide. **2022**, 119,	0
179	MoS2 as a Co-Catalyst for Photocatalytic Hydrogen Production: A Mini Review. **2022**, 27, 3289	2

178	Formic acid assisted Fabrication of Oxygen-doped Rod-like Carbon Nitride with Improved Photocatalytic Hydrogen Evolution. **2022**,	0
177	Efficient Interfacial Charge Transfer Based on 2D/2D Heterojunctions of Fe-C3N4/Ti3C2 for Improving the Photocatalytic Degradation of Antibiotics. **2022**, 10,	0
176	Elucidating the role of phosphorus doping in Co and Ni-loaded carbon nitride photocatalysts for nefazodone degradation. **2022**,	0
175	Selective Photocatalytic CO2 Reduction to CH4 on Tri-s-triazine-Based Carbon Nitride via Defects and Crystal Regulation: Synergistic Effect of Thermodynamics and Kinetics.	1
174	Covalent Triazine Frameworks with Defective Accumulation Sites: Exceptionally Modulated Electronic Structure for Solar-Driven Oxidative Activation of Peroxymonosulfate.	0
173	Single-Metal Atoms and Ultra-Small Clusters Manipulating Charge Carrier Migration in Polymeric Perylene Diimide for Efficient Photocatalytic Oxygen Production. 2200716	4
172	Hydrogen peroxide-impregnated supramolecular precursors synthesize mesoporous-rich ant nest-like filled tubular g-C3N4 for effective photocatalytic removal of pollutants. **2022**, 137332	1
171	Protrudent electron transfer channels on kaolinite modified iron oxide QDs/N vacancy graphitic carbon nitride driving superior catalytic oxidation. **2022**, 436, 129244	1
170	Graphitic carbon nitride-based photocatalysts in the applications of environmental catalysis. **2023**, 124, 570-590	5
169	Construction of High-performance g-C3N4-based Photo-Fenton Catalysts by Ferrate-induced Defect Engineering.	1
168	Improving the Oxygen Evolution Activity by Constructing Perylene Imide Based Z-Scheme Heterojunction.	0
167	Improved Photocatalytic Activities of g-C3N4 Nanosheets by B Doping and Ru-Oxo Cluster Modification for CO2 Conversion. **2022**, 126, 9704-9712	0
166	BiFeO3 Bandgap Engineering by Dopants and Defects Control for Efficient Photocatalytic Water Oxidation. **2022**, 118737	1
165	Efficient Removal of 2-Chloroethyl Ethyl Sulfide in Solution under Solar Light by Magnesium Oxide-decorated Polymeric Carbon Nitride Photocatalysts and Mechanism Investigation. **2022**, 100255	0
164	Homogeneous nitrogen-doped (111)-type layered Sr5Nb4O15−xNx as a visible-light-responsive photocatalyst for water oxidation.	2
163	A self-assembly strategy to synthesize carbon doped carbon nitride microtubes with a large π-electron conjugated system for efficient H2 evolution. **2022**, 447, 137436	0
162	Rational design of 3D carbon nitrides assemblies with tunable nano-building blocks for efficient visible-light photocatalytic CO2 conversion. **2022**, 316, 121612	1
161	Synergistic Effects of Oxygen Vacancies and Heterostructures for Visible-Light-Driven Photoreduction of Uranium.	

160	Unraveling the Mechanism on Ultrahigh Efficiency Photocatalytic H 2 O 2 Generation for Dual-Heteroatom Incorporated Polymeric Carbon Nitride. 2205119	5
159	Recent Progress in Doped g-C3N4 Photocatalyst for Solar Water Splitting: A Review. 10,	1
158	Metal-free boron doped g-C3N5 catalyst: efficient doping regulatory strategy for photocatalytic water splitting. **2022**, 154186	2
157	Donor-acceptor anchoring nanoarchitectonics in polymeric carbon nitride for rapid charge transfer and enhanced visible-light photocatalytic hydrogen evolution reaction. **2022**, 197, 378-388	
156	Enhanced boron modified graphitic carbon nitride for the selective photocatalytic production of benzaldehyde. **2022**, 298, 121613	0
155	Understanding dual-vacancy heterojunction for boosting photocatalytic CO2 reduction with highly selective conversion to CH4. **2022**, 316, 121679	2
154	Carbon nitride for photocatalytic water splitting to produce hydrogen and hydrogen peroxide. **2022**, 26, 101028	2
153	N-hexane-assisted synthesis of plasmonic Au-mediated polymeric carbon nitride photocatalyst for remarkable H2 evolution under visible-light irradiation. **2022**, 627, 398-404	0
152	Enhanced nonsacrificial photocatalytic generation of hydrogen peroxide under visible light using modified graphitic carbon nitride with doped phosphorus and loaded carbon quantum dots: constructing electron transfer channel. **2022**,	0
151	Homojunction photocatalysts for water splitting.	3
150	Defect-rich ultrathin poly-heptazine-imide-framework nanosheets with alkali-ion doping for photocatalytic solar hydrogen and selective benzylamine oxidation.	1
149	Three Coordinate Nitrogen (N3c) Vacancies from In-Situ Hydrogen Bond Breaking Over Polymeric Carbon Nitride for Efficient Photocatalysis.	
148	Photochemical Systems for Solar-to-Fuel Production. **2022**, 5,	1
147	Bay-Monosubstitution with Electron-Donating Group as an Efficiently Strategy to Functionalize Perylene Imide Polymer for Enhancing Photocatalytic Oxygen Evolution Activity. 2205895	1
146	Key Role of Valence Band Position in Porous Carbon Nitride for Photocatalytic Water Splitting. **2022**, 126, 14173-14179	1
145	Oxygen vacancy rich □MnO2 @B/O-g-C3N4 photocatalyst: A thriving 1D-2D surface interaction effective towards photocatalytic O2 and H2 evolution through Z-scheme charge dynamics. **2022**,	2
144	Ultrafast Electron Transfer from Crystalline g-C3N4 to Pt Revealed by Femtosecond Transient Absorption Spectroscopy.	2
143	Development of machine learning models to enhance element-doped g-C3N4 photocatalyst for hydrogen production through splitting water. **2022**,	0

142	Carbon-based catalyst supports for oxygen reduction in proton-exchange membrane fuel cells. **2022**,	2
141	Enhanced indirect attack behavior of 1O2 for photocatalytic H2O2 production: possible synergistic regulation of spin polarization and water bridge on photocatalytic reaction. **2022**,	0
140	Photocatalytic methane conversion to C1 oxygenates over palladium and oxygen vacancies co-decorated TiO 2.	1
139	Visible light active IrO2/TiO2 films for oxygen evolution from photocatalytic water splitting in an optofluidic planar microreactor. **2022**, 197, 902-910	0
138	Synergistic effects of oxygen vacancies and heterostructures for visible-light-driven photoreduction of uranium. **2022**, 301, 121966	0
137	Defective carbon nitride ultrathin nanosheets enriched with amidoxime groups for enhanced visible light-driven reduction of hexavalent uranium. **2022**, 628, 840-848	0
136	Defect engineering in polymeric carbon nitride with accordion structure for efficient photocatalytic CO2 reduction and H2 production. **2022**, 450, 138425	1
135	Accelerating photogenerated charge kinetics via the g-C3N4 Schottky junction for enhanced visible-light-driven CO2 reduction. **2022**, 318, 121863	0
134	A Crystalline Carbon Nitride Based Near-Infrared Active Photocatalyst. 2207375	2
133	Effects of vacancies on the electronic structures and photocatalytic properties of g-C3N4. **2022**, 206, 111483	0
132	Enhanced solar hydrogen production by template-free oxygen doped porous graphitic carbon nitride photocatalysts. **2022**, 26, 101173	0
131	Electrostatic potential of the incorporated asymmetry molecules induced high charge separation efficiency of the modified carbon nitride copolymers. **2022**, 319, 121922	0
130	Stitching electron localized heptazine units with □arbon patches□to regulate exciton dissociation behavior of carbon nitride for photocatalytic elimination of petroleum hydrocarbons. **2023**, 452, 139092	0
129	Manipulation of n -□ electronic transitions via implanting thiophene rings into two-dimensional carbon nitride nanosheets for efficient photocatalytic water purification. **2022**, 10, 20559-20570	1
128	Engineering of Bi□3 and sulfur-vacancy dual sites for efficient photocatalytic N-alkylation of amines.	0
127	Synergistic effect of cyano defects and CaCO3 in graphitic carbon nitride nanosheets for efficient visible-light-driven photocatalytic NO removal. **2023**, 442, 130040	1
126	Defects controlling, elements doping, and crystallinity improving triple-strategy modified carbon nitride for efficient photocatalytic diclofenac degradation and H2O2 production. **2023**, 321, 121941	1
125	Recent Advances of Doping and Surface Modifying Carbon Nitride with Characterization Techniques. **2022**, 12, 962	4

124	Polymer Photocatalyst□Enzyme Coupled Artificial Photosynthesis System for CO2 Reduction into Formate Using Water as the Electron Donor. **2022**, 10, 12065-12071	1
123	Molecularly imprinted voltammetric sensor sensibilized by nitrogen-vacancy graphitized carbon nitride and Ag-MWCNTs towards the detection of acetaminophen.	0
122	Light-Induced Ammonia Generation over Defective Carbon Nitride Modified with Pyrite. 2202403	1
121	Recent advances in covalent organic framework (COF) nanotextures with band engineering for stimulating solar hydrogen production: A comprehensive review. **2022**, 47, 34323-34375	0
120	An eco-friendly acidic catalyst phosphorus-doped graphitic carbon nitride for efficient conversion of fructose to 5-Hydroxymethylfurfural. **2022**,	0
119	Accurate design of porous g-C3N4+x with greatly extended visible-light response for enhanced photocatalytic performance and mechanism insight for environmental remediation.	0
118	Metallic WN Plasmonic Fabricated g-C3N4 Significantly Steered Photocatalytic Hydrogen Evolution under Visible and Near-Infrared Light.	0
117	Revealing the synergetic interaction between amino and carbonyl functional groups and their effect on the electronic and optical properties of carbon dots.	2
116	Attenuating metal-substrate conjugation in atomically dispersed nickel catalysts for electroreduction of CO2 to CO. **2022**, 13,	4
115	Boosted Activity of g-C3N4/UiO-66-NH2 Heterostructures for the Photocatalytic Degradation of Contaminants in Water. **2022**, 23, 12871	0
114	Carbon defective g-C3N4 thin-wall tubes for drastic improvement of photocatalytic H2 production. **2022**,	0
113	Decorating Phosphorus-Doped g-C 3 N 4 with Zinc Porphyrin Metal□Organic Framework via an Electrostatic Self-Assembly Process: An Efficient Strategy to Boost Photocatalytic Hydrogen Evolution Performance. 2200714	0
112	Manipulating interface built-in electric fields for efficient spatial charge separation in hematite-based photoanodes.	0
111	Metal single atom doped 2D materials for photocatalysis: Current status and future perspectives.	0
110	Freeze-drying synthesis of O,N□eF3 with enhanced photocatalytic oxygen evolution. **2022**,	0
109	One-Step Calcination to Gain Exfoliated g-C3N4/MoO2 Composites for High-Performance Photocatalytic Hydrogen Evolution. **2022**, 27, 7178	0
108	Modified g-C3N4 with Boron Doping for Efficient Simultaneous Catalytic Reduction of Ag+ and Organic Pollutants. **2022**, 100258	0
107	Single-atomic Co-N4-O site boosting exciton dissociation and hole extraction for improved photocatalytic hydrogen evolution in crystalline carbon nitride. **2022**, 104, 107938	1

106	Efficient cataluminescence sensor towards (NH4)2S based on graphitic carbon nitride by nitrogen vacancy modulation. **2023**, 375, 132890	0
105	Covalent organic frameworks towards photocatalytic applications: Design principles, achievements, and opportunities. **2023**, 475, 214882	2
104	Advancing charge carriers separation and transformation by nitrogen self-doped hollow nanotubes g-C3N4 for enhancing photocatalytic degradation of organic pollutants. **2023**, 312, 137145	0
103	Carbon-Nitride-Based Materials for Advanced Lithium□Sulfur Batteries. **2022**, 14,	0
102	A general strategy to synthesize single-atom metal-oxygen doped polymeric carbon nitride with highly enhanced photocatalytic water splitting activity. **2022**, 122180	1
101	Defect Engineering Modulated Iron Single Atoms with Assist of Layered Clay for Enhanced Advanced Oxidation Processes. 2204793	0
100	Interlayer Charge Transfer Over Graphitized Carbon Nitride Enabling Highly-Efficient Photocatalytic Nitrogen Fixation. 2205388	1
99	Two-Dimensional Ultrathin Graphic Carbon Nitrides with Extended □-Conjugation as Extraordinary Efficient Hydrogen Evolution Photocatalyst. 2205834	0
98	One-step thermal polymerization synthesis of nitrogen-rich g-C3N4 nanosheets enhances photocatalytic redox activity. **2022**, 12, 33598-33604	0
97	Chemically Bonded and Plasmonic Z-Scheme Junction for High-Performance Artificial Photosynthesis of Hydrogen Peroxide.	0
96	Partially cross-linked carbon nitride with unimpeded charge transfer between different chains for boosting photocatalytic hydrogen production.	0
95	Improved charge transport through 2D framework in fully condensed carbon nitride for efficient photocatalytic hydrogen production. **2023**, 417, 360-367	0
94	Inside-and-out modification of graphitic carbon nitride (g-C3N4) photocatalysts via defect engineering for energy and environmental science. **2023**, 105, 108032	2
93	In-situ construction of □-MoC/g-C3N4 Mott-Schottky heterojunction with high-speed electrons transfer channel for efficient photocatalytic H2 evolution.	0
92	The coral-like carbon nitride array: Rational design for efficient photodegradation of tetracycline under visible light. **2023**, 11, 109201	1
91	Highly active heterogeneous FeCo metallic oxides for peroxymonosulfate activation: The mechanism of oxygen vacancy enhancement. **2023**, 11, 109071	0
90	Triphenylphosphine assisted phosphorization of g-C3N4 for enhanced photocatalytic activity. **2023**, 333, 133726	0
89	Surface engineering of phase controlled defective 1□T-MoS2 QDs@g-C3Nx material for significantly enhanced hydrogen evolution under visible-light irradiation. **2023**, 308, 122920	0

88	Higher-than-common temperature short-time processed polymeric carbon nitride nanosheets as an efficient photocatalyst for H2 production. **2023**, 938, 168386	0
87	Rational design of modified donor-acceptor functionalized graphitic carbon nitride structures with tailored optoelectronic and textural features for visible light-assisted H2O2 production. **2023**, 937, 168420	0
86	Configuration regulation of active sites by accurate doping inducing self-adapting defect for enhanced photocatalytic applications: A review. **2023**, 478, 214970	0
85	Fabricating metal-free Z-scheme heterostructures with nitrogen-deficient carbon nitride for fast photocatalytic removal of acetaminophen. **2023**, 308, 122964	0
84	Ti□N coordination bonds boost Z-scheme interfacial charge transfer in TiO2/C-deficient g-C3N4 heterojunctions for enhanced photocatalytic phenolic pollutant degradation. **2023**, 614, 156118	0
83	Plasma Ag-Modified □Fe2O3/g-C3N4 Self-Assembled S-Scheme Heterojunctions with Enhanced Photothermal-Photocatalytic-Fenton Performances. **2022**, 12, 4212	2
82	Superior photopiezocatalytic performance by enhancing spontaneous polarization through post-synthesis structure distortion in ultrathin Bi2WO6 nanosheet polar photocatalyst. **2022**, 140471	0
81	Mesoporous Carbon Nitride with □Electron-Rich Domains and Polarizable Hydroxyls Fabricated via Solution Thermal Shock for Visible-Light Photocatalysis.	0
80	Ni-Based Janus Pentagonal Monolayers as Promising Water-Splitting Photocatalysts. **2022**, 126, 20354-20363	0
79	N-doped synergistic porous thin-walled g-C3N4 nanotubes for efficient tetracycline photodegradation. **2022**, 140570	0
78	Ru/Se-RuO 2 Composites via Controlled Selenization Strategy for Enhanced Acidic Oxygen Evolution. 2211102	0
77	Interface Engineering in 2D/2D Heterogeneous Photocatalysts. 2205767	2
76	Unraveling the phosphorus-nitrogen bridge in carbon quantum dots/carbon nitride for efficient photodegradation of organic contaminants. **2022**,	1
75	Low Concentration of Peroxymonosulfate Triggers Dissolved Oxygen Conversion over Single Atomic Fe□N 3 O 1 Sites for Water Decontamination. 2205583	0
74	Latest Progress on Photocatalytic H2 Production by Water Splitting and H2 Production Coupled with Selective Oxidation of Organics over ZnIn2S4-Based Photocatalysts.	1
73	Controllable synthesis for carbon self-doping and structural defect co-modified g-C3N4: enhanced photocatalytic oxidation performance and the mechanism insight. **2023**, 168921	0
72	Fabrication and Enhanced Visible-Light Photocatalytic H2 Production of B-doped N-deficient g-C3N4/CdS Hybrids with Robust 2D/2D Hetero-Interface Interaction.	0
71	Self-assembled 3D hollow carbon nitride with electron delocalization for enhanced photocatalytic hydrogen evolution. **2023**, 119032	0

70	Anti-Stoke effect induced enhanced photocatalytic hydrogen production. 20220041	0
69	Defect-induced Activity Enhancement of Self-exfoliated Carbon Nitrides for Solar Hydrogen Evolution.	0
68	Controlled Synthesis of Nitro-Terminated Oligothiophene/Crystallinity-Improved g-C3N4 Heterojunctions for Enhanced Visible-Light Catalytic H2 Production.	1
67	Extended π-conjugated system in carbon nitride by incorporating pyridine rings and N vacancies for photocatalytic H2 evolution and H2O2 production. **2023**, 204, 465-474	0
66	Atomic symmetry alteration in carbon nitride to modulate charge distribution for efficient photocatalysis. **2023**, 418, 22-30	0
65	Codoping g-C3N4 with boron and graphene quantum dots: Enhancement of charge transfer for ultrasensitive and selective photoelectrochemical detection of dopamine. **2023**, 224, 115050	0
64	0D/2D Schottky junction synergies with 2D/2D S-scheme heterojunction strategy to achieve uniform separation of carriers in 0D/2D/2D quasi CNQDs/TCN/ZnIn2S4 towards photocatalytic remediating petroleum hydrocarbons polluted marine. **2023**, 325, 122387	0
63	An NIR-Driven Upconversion/C3N4/CoP Photocatalyst for Efficient Hydrogen Production by Inhibiting Electron−Hole Pair Recombination for Alzheimer's Disease Therapy.	0
62	The direct catalytic synthesis of ultrasmall Cu2O-coordinated carbon nitrides on ceria for multimodal antitumor therapy.	1
61	Modification of In2O3 by electronic promoters to regulate electron transfer behavior of CO2/H2O adsorption and the selectivity of photocatalytic CO2 reduction.	0
60	Donor−Acceptor Covalent Organic Frameworks Films with Ultralow Band Gaps to Enhanced Third-Order Nonlinear Optical Properties. 694-703	0
59	The coupling effect of carbon spheres and cobalt-involved carbon nitrides stacked on TiO2 nanorod arrays for promoted solar water oxidation. **2023**,	0
58	Review on the Application of Semiconductor Heterostructures in Photocatalytic Hydrogen Evolution: State-of-the-Art and Outlook. **2023**, 37, 1633-1656	0
57	Remarkably improved photocatalytic selective oxidation of toluene to benzaldehyde with O2 over metal-free delaminated g-C3N4 nanosheets: synergistic effect of enhanced textural properties and charge carrier separation.	0
56	The synergistic effect of potassium ions and nitrogen defects on carbon nitride for enhanced photocatalytic hydrogen evolution. **2023**,	0
55	Plasmon Au/K-doped defective graphitic carbon nitride for enhanced hydrogen production.	0
54	2-Dimensional g-C3N4 nanosheets modified LATP-based Polymer-in-Ceramic electrolyte for solid-state lithium batteries. **2023**, 942, 169064	0
53	Spatially restricted strategy to construct crystalline carbon nitride nanosheet assists exciton dissociation to enhance photocatalytic hydrogen evolution activity. **2023**, 616, 156523	0

52	Donor-acceptor engineered g-C3N4 enabling peroxymonosulfate photocatalytic conversion to 1O2 with nearly 100% selectivity. **2023**, 448, 130869	0
51	Significantly enhanced photothermal catalytic CO2 reduction over TiO2/g-C3N4 composite with full spectrum solar light. **2023**, 638, 63-75	0
50	Ultrathin porous graphitic carbon nitride from recrystallized precursor toward significantly enhanced photocatalytic water splitting. **2023**, 637, 271-282	0
49	Boosting exciton dissociation and charge transfer by regulating dielectric constant in polymer carbon nitride for CO2 photoreduction. **2023**, 327, 122417	0
48	Boosted built-in electric field and active sites based on Ni-doped heptazine/triazine crystalline carbon nitride for achieving high-efficient photocatalytic H2 evolution. **2023**, 1280, 135076	1
47	Designing novel 0D/1D/2D NiO@La(OH)3/g-C3N4 heterojunction for enhanced photocatalytic hydrogen production. **2023**, 460, 141667	0
46	A Review on the Synthesis, Properties, and Characterizations of Graphitic Carbon Nitride (g-C3N4) for Energy Conversion and Storage Applications. **2023**, 101080	0
45	C, N-vacancies and Br dopant co-enhanced photocatalytic H2 evolution of g-C3N4 from water and simulated seawater splitting. **2023**, 461, 142046	0
44	Efficient photosynthesis of H2O2 via two-electron oxygen reduction reaction by defective g-C3N4 with terminal cyano groups and nitrogen vacancies. **2023**, 463, 142512	0
43	Facile synthesis of N vacancy g-C3N4 using Mg-induced defect on the amine groups for enhanced photocatalytic ·OH generation. **2023**, 449, 131046	0
42	Tailoring the three-phase microenvironment surface to induce carbon nitride oxide generating ·O2− with 100% selectivity for ultrafast photodegradation tetracycline under visible light. **2023**, 464, 142564	0
41	One-pot synthesis of porous graphitic carbon nitride with rich nitrogen vacancies and oxygen heteroatoms for boosting photocatalytic performance. **2023**, 139, 113773	0
40	Coral-like B-doped g-C3N4 with enhanced molecular dipole to boost photocatalysis-self-Fenton removal of persistent organic pollutants. **2023**, 449, 131017	0
39	A universal numerical evaluation strategy for photocatalysts based on the photoelectron transfer (PET) restriction effect: A review. **2023**, 463, 142421	0
38	Numerous defects induced by exfoliation of boron-doped g-C3N4 towards active sites modulation for highly efficient solar-to-fuel conversion. **2023**, 22, 100359	0
37	Controllably solar-driven C-C coupling organic synthesis integrated with H2 production over P-doped g-C3N4 with NiS nanoparticles modification. **2023**, 32, 101794	0
36	A high-cyano groups-content amorphous-crystalline carbon nitride isotype heterojunction photocatalyst for high-quantum-yield H2 production and enhanced CO2 reduction. **2023**, 331, 122733	0
35	Mechanical activation-enhanced doping and defect strategy to construct FeS co-doped carbon nitride for efficient photocatalytic tetracycline degradation and hydrogen evolution. **2023**, 314, 123618	0

34	Construction of triazine-heptazine-based carbon nitride heterojunctions boosts the selective photocatalytic C□ bond cleavage of lignin models. **2023**, 331, 122688	0
33	Three coordinate nitrogen (N3c) vacancies from in-situ hydrogen bond breaking over polymeric carbon nitride for efficient photocatalysis. **2023**, 11, 109495	0
32	Tremella-like Boron-doped hierarchical CN and dispersion Co phthalocyanine assembling heterojunction for photocatalytic hydrogen evolution. **2023**, 465, 142775	0
31	Rapid photocatalytic degradation of tetrabromobisphenol A using synergistic p-n/Z-scheme dual heterojunction of black phosphorus nanosheets/FeSe2/g-C3N4. **2023**, 311, 123359	0
30	O and S co-doping induced N-vacancy in graphitic carbon nitride towards photocatalytic peroxymonosulfate activation for sulfamethoxazole degradation. **2023**, 320, 138015	0
29	Engineering a Copper Single-Atom Electron Bridge to Achieve Efficient Photocatalytic CO 2 Conversion. **2023**, 135,	0
28	Engineering a Copper Single-Atom Electron Bridge to Achieve Efficient Photocatalytic CO 2 Conversion. **2023**, 62,	0
27	A green catalytic reaction system for the synthesis 5-amino-1-pentanol with furfural and ionic liquid hydroxylamine salt as the initial raw material. **2023**, 538, 112995	0
26	Mechanical pressure-induced □electron delocalization of carbon nitride for boosting photocatalytic water splitting. **2023**, 439, 114626	0
25	A hydrophilic fully conjugated covalent organic framework for photocatalytic CO2 reduction to CO nearly 100% using pure water. **2023**, 11, 5627-5635	0
24	Shallow Traps in Carbon Nitride Quantum Dots to Achieve 6.47 s Ultralong Lifetime and Wavelength-Tunable Room Temperature Phosphorescence. **2023**, 11,	0
23	Solar-Triggered Engineered 2D-Materials for Environmental Remediation: Status and Future Insights. **2023**, 10,	0
22	Highly-efficient photocatalytic hydrogen evolution triggered by spatial confinement effects over co-crystal templated boron-doped carbon nitride hollow nanotubes. **2023**, 11, 7584-7595	0
21	Deciphering the Roles of Diketone-Derived Defects on Graphite Carbon Nitride in Boosted Photocatalytic Production of H2O2. **2023**, 6, 3401-3412	0
20	Boosting charge transfer in Au-decorated B/K co-doped CN nanosheets towards enhanced photocatalytic CO2 reduction.	0
19	Constructing Spatially Separated Cage-Like Z-scheme Heterojunction Photocatalyst for Enhancing Photocatalytic H 2 Evolution. 2208266	0
18	Super-Photothermal Effect-Mediated Fast Reaction Kinetic in S-Scheme Organic/Inorganic Heterojunction Hollow Spheres Toward Optimized Photocatalytic Performance. 2207499	1
17	Synergistic Functionality of Dopants and Defects in Co-Phthalocyanine/B-CN Z-Scheme Photocatalysts for Promoting Photocatalytic CO 2 Reduction Reactions. 2208179	0

16	Potassium Poly(heptazine imide) Coupled with Ti3C2 MXene-Derived TiO2 as a Composite Photocatalyst for Efficient Pollutant Degradation. **2023**, 8, 11397-11405	0
15	Ordered porous nitrogen-vacancy carbon nitride for efficient visible-light hydrogen evolution. **2023**, 642, 53-60	0
14	BiVO4 Microspheres Coated with Nanometer-Thick Porous TiO2 Shells for Photocatalytic Water Treatment under Visible-Light Irradiation. **2023**, 6, 5545-5556	0
13	CoP decorated 2D/2D red phosphorus/B doped g-C3N4 type II heterojunction for boosted pure water splitting activity via the two-electron pathway.	0
12	Optimizing the band structure of sponge-like S-doped poly(heptazine imide) with quantum confinement effect towards boosting visible-light photocatalytic H2 generation. **2023**,	0
11	Tuning the surface hydrophilicity of a C3N4 nanosheet for efficient photocatalytic H2 evolution coupled with microplastic degradation. **2023**,	0
10	Nanoarchitecture engineering of crumpled polymeric carbon nitride nanosheets for efficient visible-light photocatalytic CO2 reduction. **2023**, 627, 157290	0
9	Synergistic effect of n-□ electronic transitions in porous ultrathin graphitic carbon nitride nanosheets for efficient photocatalytic hydrogen production. **2023**, 157305	0
8	Tandem internal electric fields in intralayer/interlayer carbon nitride homojunction with a directed flow of photo-excited electrons for photocatalysis. **2023**, 122781	0
7	Strong ferromagnetism of g-C3N4 achieved by atomic manipulation. **2023**, 14,	0
6	Single-Atom Cu Channel and N-Vacancy Engineering Enables Efficient Charge Separation and Transfer between C3N4 Interlayers for Boosting Photocatalytic Hydrogen Production. 6280-6288	0
5	Boron doping g-C3N4 supported Cu2O for photocatalytic reforming of xylose into lactic acid. **2023**, 109981	0
4	Electronic and energy level structural engineering of graphitic carbon nitride nanotubes with B and S co-doping for photocatalytic hydrogen evolution. **2023**, 645, 525-532	0
3	Defective nano-silica loaded polymeric carbon nitride for visible light driven CO2 reduction and dye degradation. **2023**, 179, 106692	0
2	Simultaneously Achieving Fast Intramolecular Charge Transfer and Mass Transport in Holey D□A Organic Conjugated Polymers for Highly Efficient Photocatalytic Pollutant Degradation. **2023**, 3, 1424-1434	0
1	Tailoring Advanced N-Defective and S-Doped g-C 3 N 4 for Photocatalytic H 2 Evolution.	0