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Comparing photosynthetic and photovoltaic efficiencies and recognizing the potential for improvement

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1271	BiotecVisions 2011, July. 2011 , 6, A1-A8		
1270	Lessons from nature about solar light harvesting. 2011 , 3, 763-74		1293
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1268	How Can the Light Reactions of Photosynthesis be Improved in Plants?. 2012 , 3, 199		19
1267	Lipid functions in cytochrome bc complexes: an odd evolutionary transition in a membrane protein structure. 2012 , 367, 3406-11		12
1266	Large-scale sequestration of atmospheric carbon via plant roots in natural and agricultural ecosystems: why and how. 2012 , 367, 1589-97		165
1265	Efficient energy transfer in light-harvesting systems: quantum-classical comparison, flux network, and robustness analysis. 2012 , 137, 174111		67
1264	Mechanistic insight into the blocking of CO diffusion in [NiFe]-hydrogenase mutants through multiscale simulation. 2012 , 109, 6399-404		40
1263	Perspectives for Photobiology in Molecular Solar Fuels. 2012 , 65, 643		2
1262	Preparation and Characterization of Catalysts for Clean Energy: A Challenge for X-rays and Electrons. 2012 , 65, 608		10
1261	An Institutional Approach to Solar Fuels Research. 2012 , 65, 573		5

1260	Application of synthetic biology in cyanobacteria and algae. 2012 , 3, 344	128
1259	15 Microalgal production systems: Global impact of industry scale-up.	6
1258	Modeling, simulation, and design criteria for photoelectrochemical water-splitting systems. 2012 , 5, 9922	232
1257	Computational methodologies and physical insights into electronic energy transfer in photosynthetic light-harvesting complexes. 2012 , 14, 10094-108	80
1256	Solar light harvesting by energy transfer: from ecology to coherence. 2012 , 5, 9374	99
1255	Nanoplasmonics: a frontier of photovoltaic solar cells. 2012 , 1, 235-248	68
1254	Carbon partitioning in soybean (<i>Glycine max</i>) leaves by combined (11) C and (13) C labeling. 2012 , 196, 1109-1121	19
1253	Insights into metabolic efficiency from flux analysis. 2012 , 63, 2343-51	36
1252	Plant and bacterial systems biology as platform for plant synthetic bio(techno)logy. 2012 , 160, 80-90	24
1251	CoFe ₂ O ₄ on a porous Al ₂ O ₃ nanostructure for solar thermochemical CO ₂ splitting. 2012 , 5, 9438	92
1250	Energy-efficient extraction of fuel and chemical feedstocks from algae. 2012 , 14, 419	82
1249	Recent Progress in Photocatalysis Mediated by Colloidal II-VI Nanocrystals. 2012 , 52, 1002-1015	100
1248	Improving photosynthesis and metabolic networks for the competitive production of phototroph-derived biofuels. 2012 , 23, 290-7	66
1247	Improving carbon fixation pathways. 2012 , 16, 337-44	102
1246	Comparison of cobalt and manganese in the chemistry of water oxidation. 2012 , 256, 2445-2452	79
1245	Porphyrins in bio-inspired transformations: Light-harvesting to solar cell. 2012 , 256, 2601-2627	219
1244	Structure and function of photosystem I and its application in biomimetic solar-to-fuel systems. 2012 , 169, 1639-53	48
1243	Biohybrid photosynthetic antenna complexes for enhanced light-harvesting. 2012 , 134, 4589-99	77

1242	Towards a Global Solar Fuels Project-Artificial Photosynthesis and the Transition from Anthropocene to Sustainocene. 2012 , 49, 348-356	12
1241	Light harvesting zinc naphthalocyanine-perylenediimide supramolecular dyads: long-lived charge-separated states in nonpolar media. 2012 , 14, 3612-21	34
1240	Horticultural lighting: present and future challenges. 2012 , 44, 427-437	42
1239	Tracking energy transfer between light harvesting complex 2 and 1 in photosynthetic membranes grown under high and low illumination. 2012 , 109, 1473-8	45
1238	Coaxial multishell nanowires with high-quality electronic interfaces and tunable optical cavities for ultrathin photovoltaics. 2012 , 109, 1407-12	197
1237	Hole Transport in Nonstoichiometric and Doped W ₂ O ₆ . 2012 , 116, 17403-17413	18
1236	In Situ Spectroscopic Examination of a Low Overpotential Pathway for Carbon Dioxide Conversion to Carbon Monoxide. 2012 , 116, 15307-15312	199
1235	Tin oxide dependence of the CO ₂ reduction efficiency on tin electrodes and enhanced activity for tin/tin oxide thin-film catalysts. 2012 , 134, 1986-9	718
1234	Detailing the optimality of photosynthesis in cyanobacteria through systems biology analysis. 2012 , 109, 2678-83	231
1233	Photocurrent of a single photosynthetic protein. 2012 , 7, 673-6	99
1232	A kinetic model of rapidly reversible nonphotochemical quenching. 2012 , 109, 15757-62	94
1231	Selective Reduction of Aqueous Protons to Hydrogen with a Synthetic Cobaloxime Catalyst in the Presence of Atmospheric Oxygen. 2012 , 124, 9515-9518	29
1230	Selective reduction of aqueous protons to hydrogen with a synthetic cobaloxime catalyst in the presence of atmospheric oxygen. 2012 , 51, 9381-4	113
1229	Artificial Leaves: Towards Bio-Inspired Solar Energy Converters. 2012 , 657-677	1
1228	Towards Global Artificial Photosynthesis (Global Solar Fuels): Energy, Nanochemistry, and Governance. 2012 , 65, 557	8
1227	Can We Progress from Solipsistic Science to Frugal Innovation?. 2012 , 141, 45-52	29
1226	Branched ZnO nanostructures as building blocks of photoelectrodes for efficient solar energy conversion. 2012 , 14, 10872-81	50
1225	Growth of non-phototrophic microorganisms using solar energy through mineral photocatalysis. 2012 , 3, 768	82

1224	Effect of Si Doping and Porosity on Hematite (Fe ₂ O ₃) Photoelectrochemical Water Oxidation Performance. 2012 , 116, 5255-5261	69
1223	Surpassing Photosynthesis: High-Efficiency and Scalable CO ₂ Utilization through Artificial Photosynthesis. 2012 , 275-292	4
1222	Optimization of photosynthetic light energy utilization by microalgae. 2012 , 1, 134-142	149
1221	Nickel oxide functionalized silicon for efficient photo-oxidation of water. 2012 , 5, 7872	154
1220	Quantification of the plasma clearance kinetics of a gadolinium-based contrast agent by photoinduced triplet harvesting. 2012 , 84, 8106-9	1
1219	Two-Dimensional Electronic Spectroscopy Reveals Ultrafast Downhill Energy Transfer in Photosystem I Trimers of the Cyanobacterium <i>Thermosynechococcus elongatus</i> . 2012 , 3, 3677-84	37
1218	Wavefunction engineering in quantum confined semiconductor nanoheterostructures for efficient charge separation and solar energy conversion. 2012 , 5, 9406	114
1217	Are we doing synthetic biology?. 2012 , 6, 79-83	14
1216	On rate limitations of electron transfer in the photosynthetic cytochrome b ₆ f complex. 2012 , 14, 13853-60	30
1215	Fundamental limits on wavelength, efficiency and yield of the charge separation triad. 2012 , 7, e36065	3
1214	Algal Biofuels: A Credible Prospective?. 2012 , 2012, 1-14	20
1213	Integrated electromicrobial conversion of CO ₂ to higher alcohols. <i>Science</i> , 2012 , 335, 1596	33-3 457
1212	Improving the efficiency of water splitting in dye-sensitized solar cells by using a biomimetic electron transfer mediator. 2012 , 109, 15612-6	260
1211	Photoelectrochemical water oxidation with photosystem II integrated in a mesoporous indium-tin oxide electrode. 2012 , 134, 8332-5	179
1210	Solar energy generation in three dimensions. 2012 , 5, 6880	52
1209	A hybrid photocatalytic system comprising ZnS as light harvester and an [Fe(2)S(2)] hydrogenase mimic as hydrogen evolution catalyst. 2012 , 5, 849-53	87
1208	Resolving the Electron Transfer Kinetics in the Bacterial Reaction Center by Pulse Polarized 2-D Photon Echo Spectroscopy. 2012 , 3, 1798-805	11
1207	Realizing artificial photosynthesis. 2012 , 155, 9-26; discussion 103-14	177

1206	Artificial photosynthesis for solar water-splitting. 2012 , 6, 511-518	1484
1205	Phase selective synthesis of metastable orthorhombic Cu ₂ ZnSnS ₄ . 2012 , 22, 7502	106
1204	Integrated photosystem II-based photo-bioelectrochemical cells. 2012 , 3, 742	197
1203	Photoreduction of catalytic platinum particles using immobilized multilayers of Photosystem I. 2012 , 28, 7952-6	24
1202	Towards a coherent picture of excitonic coherence in the Fenna-Matthews-Olson complex. 2012 , 45, 154013	28
1201	Large photovoltages generated by plant photosystem I crystals. 2012 , 24, 2988-91, 2987	26
1200	Minimizing Energy Losses in Dye-Sensitized Solar Cells Using Coordination Compounds as Alternative Redox Mediators Coupled with Appropriate Organic Dyes. 2012 , 2, 616-627	83
1199	Development of an O ₂ -Sensitive Fluorescence-Quenching Assay for the Combinatorial Discovery of Electrocatalysts for Water Oxidation. 2012 , 124, 6780-6784	10
1198	Development of an O ₂ -sensitive fluorescence-quenching assay for the combinatorial discovery of electrocatalysts for water oxidation. 2012 , 51, 6676-80	57
1197	Measurement of solar spectra relating to photosynthesis and solar cells: an inquiry lab for secondary science. 2012 , 40, 241-5	
1196	Interfacial dynamics and solar fuel formation in dye-sensitized photoelectrosynthesis cells. 2012 , 13, 2882-90	36
1195	Energy from plants and microorganisms: progress in plant-microbial fuel cells. 2012 , 5, 1006-11	65
1194	Water oxidation by electrodeposited cobalt oxides--role of anions and redox-inert cations in structure and function of the amorphous catalyst. 2012 , 5, 542-9	129
1193	Towards artificial leaves for solar hydrogen and fuels from carbon dioxide. 2012 , 5, 500-21	186
1192	Characterization of photochemical processes for H ₂ production by CdS nanorod-[FeFe] hydrogenase complexes. 2012 , 134, 5627-36	274
1191	Task-optimized control of open quantum systems. 2012 , 85,	15
1190	Quantum-coherent energy transfer: implications for biology and new energy technologies. 2012 , 370, 3613-7	9
1189	Alternating copolymers and alternative device geometries for organic photovoltaics. 2012 , 41 Suppl 2, 138-42	7

1188	Direct oxygen and hydrogen production by photo water splitting using a robust bioinspired manganese-oxo oligomer complex/tungsten oxide catalytic system. 2012 , 37, 8889-8896	29
1187	Voltammetry within structured liquid nanosystems: Towards the design of a flexible, three-dimensional framework for artificial photosystems. 2012 , 70, 215-227	1
1186	Temperature-sensitive PSII and promiscuous PSI as a possible solution for sustainable photosynthetic hydrogen production. 2012 , 1817, 1122-6	12
1185	Biological water oxidation: lessons from nature. 2012 , 1817, 1110-21	76
1184	Strategies for improving biological hydrogen production. 2012 , 110, 1-9	242
1183	Near-IR absorbing solar cell sensitized with bacterial photosynthetic membranes. 2012 , 88, 1467-72	18
1182	Determinants of success for promoting solar energy in Rajasthan, India. 2012 , 16, 3593-3598	51
1181	Selection, breeding and engineering of microalgae for bioenergy and biofuel production. 2012 , 30, 198-205	225
1180	Synthesis and characterization of new iridium photosensitizers for catalytic hydrogen generation from water. 2012 , 18, 3220-5	86
1179	Powering the future of molecular artificial photosynthesis with light-harvesting metallosupramolecular dye assemblies. 2013 , 42, 1847-70	459
1178	An analysis of the optimal band gaps of light absorbers in integrated tandem photoelectrochemical water-splitting systems. 2013 , 6, 2984	425
1177	Net primary energy balance of a solar-driven photoelectrochemical water-splitting device. 2013 , 6, 2380	54
1176	Photofunctional construct that interfaces molecular cobalt-based catalysts for H ₂ production to a visible-light-absorbing semiconductor. 2013 , 135, 11861-8	124
1175	Optimization of light use efficiency for biofuel production in algae. 2013 , 182, 71-8	102
1174	Design of Advanced Photocatalytic Materials for Energy and Environmental Applications. 2013 ,	65
1173	Experimental and computational exploration of ground and excited state properties of highly strained ruthenium terpyridine complexes. 2013 , 117, 6489-507	23
1172	Photobiological hydrogen production: Bioenergetics and challenges for its practical application. 2013 , 17, 1-25	59
1171	Expanding the microalgal industry--continuing controversy or compelling case?. 2013 , 17, 444-52	37

1170	Surface-Modified Anisotropic TiO ₂ Nanocrystals Immobilized in Membranes: A Biologically Inspired Solar Fuel Catalyst. 2013 , 263-278	
1169	Role of Advanced Analytical Techniques in the Design and Characterization of Improved Catalysts for Water Oxidation. 2013 , 305-339	0
1168	Energy transfer pathways in light-harvesting complexes of purple bacteria as revealed by global kinetic analysis of two-dimensional transient spectra. 2013 , 117, 11349-62	33
1167	Applied Photochemistry. 2013 ,	33
1166	Facile fabrication of hierarchical TiO ₂ nanobelt/ZnO nanorod heterogeneous nanostructure: an efficient photoanode for water splitting. 2013 , 5, 8314-20	83
1165	Renewable Energies and CO ₂ . 2013 ,	12
1164	Integration of multiple chromophores with native photosynthetic antennas to enhance solar energy capture and delivery. 2013 , 4, 3924	33
1163	Complex Systems: Photosynthesis. 2013 , 385-422	2
1162	A bio-inspired, small molecule electron-coupled-proton buffer for decoupling the half-reactions of electrolytic water splitting. 2013 , 135, 13656-9	87
1161	Energy and carbon accounting to compare bioenergy crops. 2013 , 24, 369-75	12
1160	Initial risk assessment of genetically modified (GM) microalgae for commodity-scale biofuel cultivation. 2013 , 2, 66-77	92
1159	Molecular approaches to solar energy conversion: the energetic cost of charge separation from molecular-excited states. 2013 , 371, 20120195	11
1158	Temperature and carbon assimilation regulate the chlorosome biogenesis in green sulfur bacteria. 2013 , 105, 1346-56	14
1157	The use and misuse of photosynthesis in the quest for novel methods to harness solar energy to make fuel. 2013 , 371, 20110603	10
1156	The interplay between neutral exciton and charge transfer states in single-strand polyadenine: a quantum dynamical investigation. 2013 , 12, 1527-43	16
1155	Cobalt phosphate-modified barium-doped tantalum nitride nanorod photoanode with 1.5% solar energy conversion efficiency. 2013 , 4, 2566	279
1154	Half a century of molecular bioenergetics. 2013 , 41, 1207-18	9
1153	Supramolecular BODIPY-Zn(II)-bisporphyrin dyad and trinitrofluorenone encapsulated triad as models of antenna-reaction center: synthesis, structure and photophysical properties. 2013 , 42, 12381-94	35

1152	Potential of proton-pumping rhodopsins: engineering photosystems into microorganisms. 2013 , 31, 633-42	23
1151	Electron Injection Dynamics from Photoexcited Porphyrin Dyes into SnO ₂ and TiO ₂ Nanoparticles. 2013 , 117, 21662-21670	51
1150	Habitability of Other Planets and Satellites. 2013 ,	1
1149	Optimal Sunlight Harvesting in Photovoltaics and Photosynthesis. 2013 , 117, 26896-26904	5
1148	Designing artificial photosynthetic devices using hybrid organic-inorganic modules based on polyoxometalates. 2013 , 371, 20110411	11
1147	Green Hydrogen: Algal Biohydrogen Production. 2013 , 267-284	1
1146	Response of chlorophyll d-containing cyanobacterium <i>Acaryochloris marina</i> to UV and visible irradiations. 2013 , 117, 497-507	4
1145	Ferritin as a model for developing 3rd generation nano architecture organic/inorganic hybrid photo catalysts for energy conversion. 2013 , 3, 3103	13
1144	Silicon Nanowires Show Improved Performance as Photocathode for Catalyzed Carbon Dioxide Photofixation. 2013 , 125, 4319-4322	8
1143	Photocatalytic reduction of CO ₂ for fuel production: Possibilities and challenges. 2013 , 308, 168-175	227
1142	Spectral expansion and antenna reduction can enhance photosynthesis for energy production. 2013 , 17, 457-61	64
1141	Accelerated electron transport from photosystem I to redox partners by covalently linked ferredoxin. 2013 , 15, 19608-14	9
1140	Self-assembled hollow nanosphere arrays used as low Q whispering gallery mode resonators on thin film solar cells for light trapping. 2013 , 15, 16874-82	29
1139	Sequence Matters: Modulating Electronic and Optical Properties of Conjugated Oligomers via Tailored Sequence. 2013 , 46, 1384-1392	61
1138	Spatially-explicit life cycle assessment of sun-to-wheels transportation pathways in the U.S. 2013 , 47, 1170-6	25
1137	A model for efficient, semiconductor-free solar cells via supersensitized electron transfer cascades in photogalvanic devices. 2013 , 15, 3218-26	3
1136	Phosphorylated manganese oxide electrodeposited from ionic liquid as a stable, high efficiency water oxidation catalyst. 2013 , 200, 36-40	16
1135	Engineering photorespiration: current state and future possibilities. 2013 , 15, 754-8	45

1134	Solar fuels generation and molecular systems: is it homogeneous or heterogeneous catalysis?. 2013 , 42, 2338-56	382
1133	Controlling Morphology and Molecular Packing of Alkane Substituted Phthalocyanine Blend Bulk Heterojunction Solar Cells. 2013 , 1, 1557-1565	24
1132	Photosynthetic reaction center as a quantum heat engine. 2013 , 110, 2746-51	192
1131	Review: Probing protein electron transfer mechanisms from the molecular to the cellular length scales. 2013 , 100, 82-92	29
1130	Photosystem trap energies and spectrally-dependent energy-storage efficiencies in the Chl d-utilizing cyanobacterium, <i>Acaryochloris marina</i> . 2013 , 1827, 255-65	22
1129	On the use of metabolic control analysis in the optimization of cyanobacterial biosolar cell factories. 2013 , 117, 11169-75	61
1128	Coupling and thermal integration of a solid oxide fuel cell with a magnesium hydride tank. 2013 , 38, 4740-4747	50
1127	Electronic structure and optical properties of wurtzite-kesterite $\text{Cu}_2\text{ZnSnS}_4$. 2013 , 377, 417-422	24
1126	From natural to artificial photosynthesis. 2013 , 10, 20120984	238
1125	Application of Nanoparticle Antioxidants to Enable Hyperstable Chloroplasts for Solar Energy Harvesting. 2013 , 3, 881-893	80
1124	Flexibel, leicht und durchsichtig. 2013 , 44, 84-91	2
1123	The role of chromophore coupling in singlet fission. 2013 , 46, 1290-9	206
1122	Electrobiocommodities: powering microbial production of fuels and commodity chemicals from carbon dioxide with electricity. 2013 , 24, 385-90	262
1121	Energy and environment policy case for a global project on artificial photosynthesis. 2013 , 6, 695	236
1120	A Noble-Metal-Free Hydrogen Evolution Catalyst Grafted to Visible Light-Absorbing Semiconductors. 2013 , 4, 568-72	70
1119	Quantum coherence controls the charge separation in a prototypical artificial light-harvesting system. 2013 , 4, 1602	199
1118	Photosystem II: the reaction center of oxygenic photosynthesis. 2013 , 82, 577-606	263
1117	Molecular mechanisms for generating transmembrane proton gradients. 2013 , 1827, 892-913	27

1116	Plasmonic harvesting of light energy for Suzuki coupling reactions. 2013 , 135, 5588-601	487
1115	Efficiency Limit of Molecular Solar Thermal Energy Collecting Devices. 2013 , 1, 585-590	68
1114	Silicon nanowires show improved performance as photocathode for catalyzed carbon dioxide photofixation. 2013 , 52, 4225-8	36
1113	The role of biofuels in the future energy supply. 2013 , 6, 1077	125
1112	Designing interfaces of hydrogenase-nanomaterial hybrids for efficient solar conversion. 2013 , 1827, 949-57	56
1111	Raman second hyperpolarizability determination using computational Raman activities and a comparison with experiments. 2013 , 117, 6217-23	5
1110	Solar Energy Conversion. 2013 , 267-304	2
1109	A fully integrated nanosystem of semiconductor nanowires for direct solar water splitting. 2013 , 13, 2989-92	453
1108	Challenges and Development of a Multi-Scale Computational Model for Photosystem I Decoupled Energy Conversion. 2013 , 177-202	1
1107	Hybrid artificial photosynthetic systems comprising semiconductors as light harvesters and biomimetic complexes as molecular cocatalysts. 2013 , 46, 2355-64	250
1106	Progress in understanding and engineering primary plant metabolism. 2013 , 24, 229-38	31
1105	Unraveling the role of the protein environment for [FeFe]-hydrogenase: a new application of coarse-graining. 2013 , 117, 4062-71	31
1104	High photo-electrochemical activity of thylakoid-carbon nanotube composites for photosynthetic energy conversion. 2013 , 6, 1891	146
1103	Pyrrole substituted porphyrin-pyrene dyads using vinylene spacer: Synthesis, characterization and photophysical properties. 2013 , 125, 259-266	11
1102	Photosystem I (PSI)/Photosystem II (PSII)-based photo-bioelectrochemical cells revealing directional generation of photocurrents. 2013 , 9, 2970-8	80
1101	Photocatalytic reduction of carbon dioxide to formic acid, formaldehyde, and methanol using dye-sensitized TiO ₂ film. 2013 , 129, 599-605	92
1100	3d element complexes of pentadentate bipyridine-pyridine-based ligand scaffolds: structures and photocatalytic activities. 2013 , 52, 6055-61	78
1099	Alleviation of high light-induced photoinhibition in cyanobacteria by artificially conferred biosilica shells. 2013 , 49, 7525-7	65

1098	Extending the limits of natural photosynthesis and implications for technical light harvesting. 2013 , 17, 1-15	79
1097	Monometallic Cobalt-Trisglyoximate Complexes as Precatalysts for Catalytic H ₂ Evolution in Water. 2013 , 117, 17073-17077	45
1096	Biocommodities from photosynthetic microorganisms. 2013 , 32, 989-1001	18
1095	Engineering Cellular Photocomposite Materials Using Convective Assembly. 2013 , 6, 1803-1825	9
1094	Two-dimensional electronic spectroscopy for mapping molecular photophysics. 2013 , 85, 1307-1319	22
1093	Towards a carbon-negative sustainable bio-based economy. 2013 , 4, 174	88
1092	Single-molecule spectroscopy reveals photosynthetic LH2 complexes switch between emissive states. 2013 , 110, 10899-903	61
1091	Improving Photosynthesis to Increase Food and Fuel Production by Biotechnological Strategies in Crops. 2013 , 01,	2
1090	Metabolic engineering of cyanobacteria for the production of hydrogen from water. 2013 , 41, 1254-9	17
1089	Photosynthetic Reaction Center Immobilization through Carboxylic Acid Terminated Cytochrome C Linker for Applications in Photoprotein-based Bio-photovoltaic Devices. 2013 , 1572, 1	2
1088	Photobiological H ₂ Production: Theoretical Maximum Light Conversion Efficiency and Strategies to Achieve It. 2013 , 50, 47-50	2
1087	The use of solar radiation by the photosynthetic bacterium, <i>Rhodospseudomonas palustris</i> : model simulation of conditions found in a shallow pond or a flatbed reactor. 2013 , 89, 1143-62	20
1086	Next generation biorefineries will solve the food, biofuels, and environmental trilemma in the energy-food-water nexus. 2013 , 1, 27-41	71
1085	Highly efficient reddish orange emission in Mn ²⁺ /Eu ³⁺ co-doped phosphate glasses for greenhouse. 2013 , 103, 041906	19
1084	Electron cryo-microscopy of TPPS ₄ ·2HCl tubes reveals a helical organisation explaining the origin of their chirality. 2013 , 14, 3209-14	50
1083	Cyanobacterial cellulose synthesis in the light of the photanol concept. 2013 , 181-195	3
1082	Energy: Fuelling the future. 2013 , 502, S60-1	3
1081	Oxygenic Photosynthesis in Cyanobacteria. 2013 , 3-40	19

1080	Oxygenic Photosynthesis. 2013 , 13-63	9
1079	Sr- and Mn-doped LaAlO ₃ for solar thermochemical H ₂ and CO production. 2013 , 6, 2424	275
1078	Design and development of synthetic microbial platform cells for bioenergy. 2013 , 4, 92	29
1077	. 2013 ,	13
1076	Comparative analyses of three Chlorella species in response to light and sugar reveal distinctive lipid accumulation patterns in the Microalga C. sorokiniana. 2014 , 9, e92460	91
1075	. 2014 ,	13
1074	. 2014 ,	5
1073	Production of lignofuels and electrofuels by extremely thermophilic microbes. 2014 , 5, 499-515	9
1072	Engineering pathways to biofuels in photoautotrophic microorganisms. 2014 , 5, 67-78	5
1071	Recent Developments on Cyanobacteria and Green Algae for Biohydrogen Photoproduction and Its Importance in CO ₂ Reduction. 2014 , 367-387	13
1070	Introductory lecture: systems materials engineering approach for solar-to-chemical conversion. 2014 , 176, 9-16	
1069	Current challenges in photosynthesis: from natural to artificial. 2014 , 5, 232	11
1068	Comparison of CO ₂ Photoreduction Systems: A Review. 2014 , 14, 533-549	111
1067	Oxygenic photosynthesis: translation to solar fuel technologies. 2014 , 83, 423-440	12
1066	Phycobilisome-Deficient Strains of Synechocystis sp. PCC 6803 Have Reduced Size and Require Carbon-Limiting Conditions to Exhibit Enhanced Productivity. 2014 , 165, 705-714	47
1065	Sequence Matters: Determining the Sequence Effect of Electronic Structure Properties in EConjugated Polymers. 2014 , 379-393	4
1064	Photoelectrochemical Communication between Thylakoid Membranes and Gold Electrodes through Different Quinone Derivatives. 2014 , 1, 131-139	49
1063	Photosystem I-based Biophotovoltaics on Nanostructured Hematite. 2014 , 24, 7467-7477	63

1062	The Non-Photochemical Quenching of the Electronically Excited State of Chlorophyll a in Plants: Definitions, Timelines, Viewpoints, Open Questions. 2014 , 1-44	23
1061	Chapter 6:Nanowires for Photovoltaics and Artificial Photosynthesis. 2014 , 277-311	2
1060	Enhanced light-harvesting capacity by micellar assembly of free accessory chromophores and LH1-like antennas. 2014 , 90, 1264-76	11
1059	The Metal-Driven Biogeochemistry of Gaseous Compounds in the Environment. 2014 ,	2
1058	Introduction of a synthetic CO ₂ fixing photorespiratory bypass into a cyanobacterium. 2014 , 289, 9493-500	77
1057	Formation of a Nanoparticulate Birnessite-Like Phase in Purported Molecular Water Oxidation Catalyst Systems. 2014 , 6, 2028-2038	27
1056	The protoelectric potential map (PPM): an absolute two-dimensional chemical potential scale for a global understanding of chemistry. 2014 , 20, 4194-211	34
1055	Analysis of the electronic structures of 3d transition metals doped CuGaS ₂ based on DFT calculations. 2014 , 35, 013002	9
1054	Photosynthesis at the forefront of a sustainable life. 2014 , 2, 36	48
1053	Photosynthesis in hydrogen-dominated atmospheres. 2014 , 4, 716-44	24
1052	Advances in photobioreactors for intensive microalgal production: configurations, operating strategies and applications. 2014 , 89, 178-195	107
1051	Perspective: Detecting and measuring exciton delocalization in photosynthetic light harvesting. 2014 , 140, 110901	30
1050	Plant nanobionics approach to augment photosynthesis and biochemical sensing. 2014 , 13, 400-8	612
1049	The Light Reactions of Photosynthesis as a Paradigm for Solar Fuel Production. 2014 , 47, 283-289	4
1048	The environmental photobioreactor (ePBR): An algal culturing platform for simulating dynamic natural environments. 2014 , 6, 242-249	55
1047	A critical analysis of paddlewheel-driven raceway ponds for algal biofuel production at commercial scales. 2014 , 4, 76-88	207
1046	Intramolecular radiationless transitions dominate exciton relaxation dynamics. 2014 , 599, 23-33	36
1045	An integrated artificial photosynthesis system based on peptide nanotubes. 2014 , 6, 7832-7	19

1044	Microbial BioEnergy: Hydrogen Production. 2014,	6
1043	Catalytic water splitting with an iridium carbene complex: a theoretical study. 2014, 20, 5358-68	18
1042	The large pools of metabolites involved in intercellular metabolite shuttles in C4 photosynthesis provide enormous flexibility and robustness in a fluctuating light environment. 2014, 37, 1985-8	23
1041	Engineering the TiO ₂ -graphene interface to enhance photocatalytic H ₂ production. 2014, 7, 618-26	72
1040	Photostability Assay on Light-harvesting Complex as a Material of Biophotovoltaic. 2014, 47, 189-195	1
1039	Synthesis and photophysical properties of a novel corrole- <i>n</i> -thraquinone- <i>o</i> -corrole molecular system. 2014, 153, 34-39	10
1038	Controlling ground and excited state properties through ligand changes in ruthenium polypyridyl complexes. 2014, 53, 5637-46	41
1037	A super-efficient cobalt catalyst for electrochemical hydrogen production from neutral water with 80 mV overpotential. 2014, 7, 329-334	104
1036	Solid-state biophotovoltaic cells containing photosystem I. 2014, 26, 4863-9	72
1035	Bioinspired materials: Boosting plant biology. 2014, 13, 329-31	17
1034	Cell migration: Electrifying movement. 2014, 13, 331-2	3
1033	25th anniversary article: semiconductor nanowires--synthesis, characterization, and applications. 2014, 26, 2137-84	649
1032	Engineered Photosystem II reaction centers optimize photochemistry versus photoprotection at different solar intensities. 2014, 136, 4048-55	27
1031	Sizing and simulation of a photovoltaic-wind energy system using batteries, applied for a small rural property located in the south of Brazil. 2014, 29, 151-157	62
1030	Intramolecular Polarization Induces Electron-Hole Charge Separation in Light-Harvesting Molecular Triads. 2014, 118, 126-134	36
1029	Semiconductor Nanowires for Artificial Photosynthesis. 2014, 26, 415-422	277
1028	Growing green electricity: progress and strategies for use of photosystem I for sustainable photovoltaic energy conversion. 2014, 1837, 1553-66	97
1027	Photosynthetic complex LH2 I Absorption and steady state fluorescence spectra. 2014, 77, 212-219	2

1026	Solar flux, water, and land impose limits on biology. 2014 , 111, 1059-61	2
1025	Mediator-free solar energy conversion by the artificially installed thylakoid membrane on the functionalized electrode. 2014 , 49, 55-59	14
1024	Achieving low voltage half electrolysis with a supercapacitor electrode. 2014 , 7, 1018-1022	7
1023	Single-molecule spectroscopy of photosynthetic proteins in solution: exploration of structure-function relationships. 2014 , 5, 2933-2939	22
1022	Broad excitation spectra and bright reddish-orange emission of transparent phosphate glass excited by sunshine for greenhouses. 2014 , 37, 756-759	7
1021	Nanomodification of living organisms by biomimetic mineralization. 2014 , 7, 1404-1428	34
1020	Hydrothermal synthesis, structure refinement, and electrochemical characterization of Li ₂ CoGeO ₄ as an oxygen evolution catalyst. 2014 , 2, 18428-18434	5
1019	Design, synthesis and excited-state properties of mononuclear Ru(II) complexes of tridentate heterocyclic ligands. 2014 , 43, 6184-97	124
1018	Stable quantum dot photoelectrolysis cell for unassisted visible light solar water splitting. 2014 , 8, 10403-13	147
1017	Long-distance electronic energy transfer in light-harvesting supramolecular polymers. 2014 , 53, 13609-13	65
1016	Systems Analysis of the Response of Photosynthesis, Metabolism, and Growth to an Increase in Irradiance in the Photosynthetic Model Organism <i>Chlamydomonas reinhardtii</i> . 2014 , 26, 2310-2350	88
1015	Creating electrochemical gradients by light: from bio-inspired concepts to photoelectric conversion. 2014 , 16, 19781-9	18
1014	CO ₂ Baustein des Lebens und Treiber der globalen Erwärmung. 2014 , 48, 260-268	5
1013	Electrochemical activation of Cp* iridium complexes for electrode-driven water-oxidation catalysis. 2014 , 136, 13826-34	98
1012	Increasing algal photosynthetic productivity by integrating ecophysiology with systems biology. 2014 , 32, 551-555	18
1011	Carbon dioxide bio-fixation and wastewater treatment via algae photochemical synthesis for biofuels production. 2014 , 4, 49672-49722	61
1010	Energetics and efficiency analysis of a cobaloxime-modified semiconductor under simulated air mass 1.5 illumination. 2014 , 16, 15818-24	47
1009	Using Molecular Design to Control the Performance of Hydrogen-Producing Polymer-Brush-Modified Photocathodes. 2014 , 5, 3222-6	47

1008	Research phosphate glass on turning sunlight into red light for glass greenhouse. 2014 , 137, 117-119	12
1007	Quantum Coherence and its Impact on Biomimetic Light-Harvesting. 2014 , 67, 729	2
1006	Engineered biosynthesis of bacteriochlorophyll b in Rhodobacter sphaeroides. 2014 , 1837, 1611-6	20
1005	A Light Harvesting Antenna Using Natural Extract Graminoids Coupled with Plasmonic Metal Nanoparticles for Bio-Photovoltaic Cells. 2014 , 4, 1400470	16
1004	Excitation energy transfer in the peridinin-chlorophyll a-protein complex modeled using configuration interaction. 2014 , 118, 9141-54	18
1003	The Biophysics of Photosynthesis. 2014 ,	9
1002	Redirecting photosynthetic electron flow into light-driven synthesis of alternative products including high-value bioactive natural compounds. 2014 , 3, 1-12	62
1001	Nonstoichiometric Perovskite Oxides for Solar Thermochemical H ₂ and CO Production. 2014 , 49, 2009-2018	68
1000	Artificial Leaves. 2014 , 1-23	
999	Direct Writing of Metallic Nanoparticle Concentric Multi-Ring Structures by Template-Directed Convective Self-Assembly Processes. 2014 , 2, 632-635	8
998	Copper-based water reduction catalysts for efficient light-driven hydrogen generation. 2014 , 395, 449-456	18
997	Exciton Level Structure and Dynamics in Tubular Porphyrin Aggregates. 2014 , 118, 24854-24865	34
996	High-Efficiency Silicon Solar Cells Materials and Devices Physics. 2014 , 39, 277-317	41
995	Nanobiohybrid structures based on the organized films of photosensitive membrane proteins. 2014 , 83, 38-81	8
994	Photovoltaic devices in hydrogen production. 2014 , 39, 14166-14171	15
993	Heterogeneous catalysis and the challenges of powering the planet, securing chemicals for civilised life, and clean efficient utilization of renewable feedstocks. 2014 , 7, 1801-32	44
992	On-line stable isotope gas exchange reveals an inducible but leaky carbon concentrating mechanism in Nannochloropsis salina. 2014 , 121, 311-22	10
991	The controversy over the minimum quantum requirement for oxygen evolution. 2014 , 122, 97-112	13

990	Mineral photoelectrons and their implications for the origin and early evolution of life on Earth. 2014 , 57, 897-902	8
989	Life-cycle net energy assessment of large-scale hydrogen production via photoelectrochemical water splitting. 2014 , 7, 3264-3278	144
988	Photosynthetic protein complexes as bio-photovoltaic building blocks retaining a high internal quantum efficiency. 2014 , 15, 2833-8	55
987	Interface for Light-Driven Electron Transfer by Photosynthetic Complexes Across Block Copolymer Membranes. 2014 , 5, 787-91	12
986	Electrochemical CO ₂ reduction on Cu ₂ O-derived copper nanoparticles: controlling the catalytic selectivity of hydrocarbons. 2014 , 16, 12194-201	382
985	Photoinitiated [corrected] charge separation in a hybrid titanium dioxide metalloporphyrin peptide material. 2014 , 5, 4606	21
984	New extraction procedure for protonated polyoxometalates prepared in aqueous-organic solution and characterisation of their catalytic ability. 2014 , 485, 181-187	13
983	Overall Water Splitting under Visible Light Irradiation Using Nanoparticulate RuO ₂ Loaded Cu ₂ O Powder as Photocatalyst. 2014 , 54, 221-227	15
982	Limiting and achievable efficiencies for solar thermal hydrogen production. 2014 , 39, 62-75	14
981	Light-induced cell aggregation of <i>Euglena gracilis</i> towards economically feasible biofuel production. 2014 , 4, 20693-20698	8
980	Biorefineries Concepts for Sustainability. 2014 , 1-27	1
979	Bio-based products from solar energy and carbon dioxide. 2014 , 32, 5-10	34
978	Analysis on the effect of operating conditions on electrochemical conversion of carbon dioxide to formic acid. 2014 , 39, 16506-16512	60
977	Mn ₄ Ca cluster in photosynthesis: where and how water is oxidized to dioxygen. 2014 , 114, 4175-205	477
976	Specific photosynthetic rate enhancement by cyanobacteria coated onto paper enables engineering of highly reactive cellular biocomposite "leaves". 2014 , 111, 1993-2008	22
975	Photochemically produced quasi-linear copolymers for stable and efficient electrolytes in dye-sensitized solar cells. 2014 , 289, 73-80	72
974	Cyanobuta-1,3-dienes as novel electron acceptors for photoactive multicomponent systems. 2014 , 20, 202-16	33
973	Light harvesting by lamellar chromatophores in <i>Rhodospirillum rubrum</i> . 2014 , 106, 2503-10	43

972	Natural strategies for photosynthetic light harvesting. 2014 , 10, 492-501	576
971	Photosynthetic reaction center-functionalized electrodes for photo-bioelectrochemical cells. 2014 , 120, 71-85	83
970	Photosynthesis. 2014 , 1-27	
969	Elektronischer Energietransfer über lange Distanzen in lichtsammelnden supramolekularen Polymeren. 2014 , 126, 13828-13832	18
968	Applications of ZnO Nanowires as Electrode Materials in Photosynthetic Bio-Photoelectrochemical Cells. 2015 , 1772, 1-6	1
967	Exciton Lifetime Paradoxically Enhanced by Dissipation and Decoherence: Toward Efficient Energy Conversion of a Solar Cell. 2015 , 115, 197701	7
966	Robustness, efficiency, and optimality in the Fenna-Matthews-Olson photosynthetic pigment-protein complex. 2015 , 143, 105101	13
965	Simulating cyanobacterial phenotypes by integrating flux balance analysis, kinetics, and a light distribution function. 2015 , 14, 206	6
964	Synthetic Model of the Oxygen-Evolving Center: Photosystem II under the Spotlight. 2015 , 16, 1981-3	3
963	Hematite-Based Solar Water Splitting in Acidic Solutions: Functionalization by Mono- and Multilayers of Iridium Oxygen-Evolution Catalysts. 2015 , 54, 11428-32	111
962	Hematite-Based Solar Water Splitting in Acidic Solutions: Functionalization by Mono- and Multilayers of Iridium Oxygen-Evolution Catalysts. 2015 , 127, 11590-11594	22
961	Enhanced Photoelectrocatalytic Activity of BiOI Nanoplate-Zinc Oxide Nanorod p-n Heterojunction. 2015 , 21, 15360-8	117
960	Licht: außergewöhnlicher Reaktionspartner und außergewöhnliches Produkt. 2015 , 127, 11474-11492	23
959	Künstliche Photosynthese für die Produktion von nachhaltigen Kraftstoffen und chemischen Produkten. 2015 , 127, 3309-3316	60
958	Light: A Very Peculiar Reactant and Product. 2015 , 54, 11320-37	83
957	6. Biotechnological potential of cyanobacteria. 2015 , 141-164	1
956	Photosynthetic constraints on fuel from microbes. 2015 , 3, 36	16
955	Are Biofuels an Effective and Viable Energy Strategy for Industrialized Societies? A Reasoned Overview of Potentials and Limits. 2015 , 7, 8491-8521	50

954	Cyanobacteria: Photoautotrophic Microbial Factories for the Sustainable Synthesis of Industrial Products. 2015 , 2015, 754934	89
953	Tuning Range-Separated Density Functional Theory for Photocatalytic Water Splitting Systems. 2015 , 11, 1700-9	50
952	Characterizing Synthetic Biology Through Its Novel and Enhanced Functionalities. 2015 , 71-104	2
951	Genetic Engineering of Marine Microalgae to Optimize Bioenergy Production. 2015 , 371-381	3
950	Progress and perspectives in exploiting photosynthetic biomolecules for solar energy harnessing. 2015 , 8, 2551-2573	85
949	Implementation of photobiological H ₂ production: the O ₂ sensitivity of hydrogenases. 2015 , 125, 383-93	63
948	Emergent Models for Artificial Light-Harvesting. 2015 , 2,	3
947	Solar-to-fuel conversion in algae and cyanobacteria. 2015 ,	10
946	Meeting the global food demand of the future by engineering crop photosynthesis and yield potential. 2015 , 161, 56-66	515
945	Tuning into blue and red luminescence in dual-phase nano-glass/ceramics. 2015 , 645, 38-44	3
944	Alkyne substituted mononuclear photocatalysts based on [RuCl(bpy)(tpy)] ⁺ . 2015 , 44, 11368-79	8
943	Energy efficiency of the sunlight harvesting and storing system in bacterial photosynthesis: comparison with semiconductor photovoltaic cells. 2015 , 39, 276-283	6
942	Improving the photoconversion efficiency: An integrated photovoltaic-photobioreactor system for microalgal cultivation. 2015 , 10, 202-209	27
941	Shifting the Sun: Solar Spectral Conversion and Extrinsic Sensitization in Natural and Artificial Photosynthesis. 2015 , 2, 1500218	55
940	ARTIFICIAL PHOTOSYNTHESIS. More efficient together. <i>Science</i> , 2015 , 350, 738-9	33-3 44
939	Biosolar cells: global artificial photosynthesis needs responsive matrices with quantum coherent kinetic control for high yield. 2015 , 5, 20150014	25
938	Interplay between Dephasing and Geometry and Directed Heat Flow in Exciton Transfer Complexes. 2015 , 119, 25252-25259	12
937	Toward a Methodology for Systematically Generating Energy- and Materials-Efficient Concepts Using Biological Analogies. 2015 , 137,	5

936	Effects of Br substituent on catalytic performance of Ru-bda (H ₂ bda = 2,2'-bipyridine-6,6'-dicarboxylic acid) catalysts for water oxidation. 2015 , 36, 1742-1749	14
935	Platinum(II)porphyrin as a sensitizer for visible-light driven water oxidation in neutral phosphate buffer. 2015 , 8, 975-982	35
934	Tailoring assemblies of plasmonic silver/gold and zincgallium layered double hydroxides for photocatalytic conversion of carbon dioxide using UVvisible light. 2015 , 504, 238-247	52
933	BiVO ₄ as photocatalyst for solar fuels production through water splitting: A short review. 2015 , 504, 158-170	113
932	Efficient solar-to-fuels production from a hybrid microbial-water-splitting catalyst system. 2015 , 112, 2337-42	281
931	What Limits Photon Upconversion on Mesoporous Thin Films Sensitized by Solution-Phase Absorbers?. 2015 , 119, 4550-4564	26
930	Single-Molecule Identification of Quenched and Unquenched States of LHCII. 2015 , 6, 860-7	70
929	PSII-LHCII supercomplex organizations in photosynthetic membrane by coarse-grained simulation. 2015 , 119, 3999-4008	11
928	Solar fuels vis-à-vis electricity generation from sunlight: The current state-of-the-art (a review). 2015 , 44, 904-932	45
927	Algal biofuels in Canada: Status and potential. 2015 , 44, 620-642	41
926	Evidence for deep acceptor centers in plant photosystem I crystals. 2015 , 119, 1374-9	3
925	Ultrafast Nano-Focusing for Imaging and Spectroscopy with Electrons and Light. 2015 , 281-324	1
924	A stable, reusable, and highly active photosynthetic bioreactor by bio-interfacing an individual cyanobacterium with a mesoporous bilayer nanoshell. 2015 , 11, 2003-10	30
923	An Integrated Device View on Photo-Electrochemical Solar-Hydrogen Generation. 2015 , 6, 13-34	48
922	Artificial photosynthesis for sustainable fuel and chemical production. 2015 , 54, 3259-66	444
921	A monolithic and standalone solar-fuel device having comparable efficiency to photosynthesis in nature. 2015 , 3, 5835-5842	47
920	Theoretical limits of photovoltaics efficiency and possible improvements by intuitive approaches learned from photosynthesis and quantum coherence. 2015 , 43, 1073-1089	112
919	Molecular Systems for Solar H ₂ : Path to a Renewable Future. 2015 , 35, 82-120	6

918	Structure and energy transfer in photosystems of oxygenic photosynthesis. 2015 , 84, 659-83	195
917	A theoretical perspective on charge transfer in photocatalysis. The example of Ir-based systems. 2015 , 304-305, 133-145	40
916	Photosynthetic terpene hydrocarbon production for fuels and chemicals. 2015 , 13, 137-46	39
915	A molecular catalyst for water oxidation that binds to metal oxide surfaces. 2015 , 6, 6469	218
914	Enabling unassisted solar water splitting by iron oxide and silicon. 2015 , 6, 7447	359
913	Directionality of Electron Transfer in Type I Reaction Center Proteins: High-Frequency EPR Study of PS I with Removed Iron-Sulfur Centers. 2015 , 119, 13771-6	7
912	Self-Assembled Light-Harvesting System from Chromophores in Lipid Vesicles. 2015 , 119, 10231-43	29
911	Cyanobacterial photo-driven mixotrophic metabolism and its advantages for biosynthesis. 2015 , 9, 308-316	22
910	Highly matched spectrum needed for photosynthesis in Ce ³⁺ /Er ³⁺ /Yb ³⁺ tri-doped oxyfluoride glass ceramics. 2015 , 648, 75-78	5
909	Hybrid photocathodes for solar fuel production: coupling molecular fuel-production catalysts with solid-state light harvesting and conversion technologies. 2015 , 5, 20140085	16
908	Wiring of Photosystem II to Hydrogenase for Photoelectrochemical Water Splitting. 2015 , 137, 8541-9	177
907	Delocalized quantum states enhance photocell efficiency. 2015 , 17, 5743-50	42
906	Metal-free hydrogen evolution with nanoparticles derived from pyrene via two-photon ionization induced by laser irradiation. 2015 , 51, 11515-8	5
905	Redesigning photosynthesis to sustainably meet global food and bioenergy demand. 2015 , 112, 8529-36	515
904	Large photocurrent response and external quantum efficiency in biophotoelectrochemical cells incorporating reaction center plus light harvesting complexes. 2015 , 16, 1112-8	39
903	Efficient pathways of excitation energy transfer from delocalized S ₂ excitons in the peridinin-chlorophyll a-protein complex. 2015 , 119, 5755-64	19
902	Ordered photo- and electroactive thin polymer layers. 2015 , 65, 155-170	15
901	Emission red shift and energy transfer behavior of color-tunable KMg ₄ (PO ₄) ₃ :Eu ²⁺ ,Mn ²⁺ phosphors. 2015 , 3, 5516-5523	49

900	Tuning into blue and red: europium single-doped nano-glass-ceramics for potential application in photosynthesis. 2015 , 3, 3141-3149	45
899	Demonstration of the Entire Production Chain to Renewable Kerosene via Solar Thermochemical Splitting of H ₂ O and CO ₂ . 2015 , 29, 3241-3250	130
898	Primary electron transfer processes in photosynthetic reaction centers from oxygenic organisms. 2015 , 125, 51-63	80
897	Principles of light harvesting from single photosynthetic complexes. 2015 , 5, 20140088	14
896	Spatio-temporal resolution of primary processes of photosynthesis. 2015 , 177, 547-62	2
895	Experimental demonstrations of spontaneous, solar-driven photoelectrochemical water splitting. 2015 , 8, 2811-2824	411
894	Strategies for Optimizing Algal Biology for Enhanced Biomass Production. 2015 , 3,	28
893	Iridium-based complexes for water oxidation. 2015 , 44, 12452-72	133
892	ATP synthase. 2015 , 84, 631-57	191
891	Stark absorption spectroscopy on the carotenoids bound to B800-820 and B800-850 type LH2 complexes from a purple photosynthetic bacterium, <i>Phaeospirillum molischianum</i> strain DSM120. 2015 , 572, 158-166	2
890	Electrosynthesis of highly transparent cobalt oxide water oxidation catalyst films from cobalt aminopolycarboxylate complexes. 2015 , 8, 1394-403	19
889	One-dimension-based spatially ordered architectures for solar energy conversion. 2015 , 44, 5053-75	317
888	Nanowire-bacteria hybrids for unassisted solar carbon dioxide fixation to value-added chemicals. 2015 , 15, 3634-9	269
887	Methods for comparing the performance of energy-conversion systems for use in solar fuels and solar electricity generation. 2015 , 8, 2886-2901	166
886	1 Cyanobacterial design cell for the production of hydrogen from water. 1-18	
885	Recent Advances (2012-2015) in the Photocatalytic Conversion of Carbon Dioxide to Fuels Using Solar Energy: Feasibility for a New Energy. 2015 , 1-46	13
884	Photoelectrochemical water splitting in an organic artificial leaf. 2015 , 3, 23936-23945	51
883	Energy and Climate: A Global Perspective. 2015 , 1-14	

882	Molecular co-catalyst accelerating hole transfer for enhanced photocatalytic H ₂ evolution. 2015 , 6, 8647	141
881	Cu ₂ S/graphene oxide nanocomposites for efficient photocatalysis driven by real sunlight. 2015 , 5, 94375-94379	9
880	Molecular Chromophore-Catalyst Assemblies for Solar Fuel Applications. 2015 , 115, 13006-49	352
879	Photon Upconversion from Chemically Bound Triplet Sensitizers and Emitters on Mesoporous ZrO ₂ : Implications for Solar Energy Conversion. 2015 , 119, 25792-25806	26
878	Absorption spectra and sunlight conversion efficiency in fullerene bonded supramolecules on nanostructured ZnO. 2015 , 67, 1262-1267	6
877	Ultra-broadband 2D electronic spectroscopy of carotenoid-bacteriochlorophyll interactions in the LH1 complex of a purple bacterium. 2015 , 142, 212433	21
876	Biomass and carbon dioxide capture and storage: A review. 2015 , 40, 401-430	174
875	An integrated cobalt disulfide (CoS ₂) co-catalyst passivation layer on silicon microwires for photoelectrochemical hydrogen evolution. 2015 , 3, 23466-23476	56
874	A quest for the artificial leaf. 2015 , 66, 37-44	23
873	Near-Infrared Plasmonic-Enhanced Solar Energy Harvest for Highly Efficient Photocatalytic Reactions. 2015 , 15, 6295-301	202
872	Photocatalytic water oxidation by layered Co/h-BCN hybrids. 2015 , 58, 867-876	50
871	Role of the Electron Spin Polarization in Water Splitting. 2015 , 6, 4916-22	95
870	Electronic Structure of Fullerene Acceptors in Organic Bulk-Heterojunctions: A Combined EPR and DFT Study. 2015 , 6, 4730-5	11
869	Sortase-mediated ligation of PsaE-modified photosystem I from <i>Synechocystis</i> sp. PCC 6803 to a conductive surface for enhanced photocurrent production on a gold electrode. 2015 , 31, 1180-8	21
868	Enhancement of hydrogen production using photoactive nanoparticles on a photochemically inert photonic macroporous support. 2015 , 17, 493-9	18
867	Water Oxidation at Electrodes Modified with Earth-Abundant Transition-Metal Catalysts. 2015 , 2, 37-50	193
866	Light-driven hydrogen production from Photosystem I-catalyst hybrids. 2015 , 25, 1-8	49
865	Angle-independent hot carrier generation and collection using transparent conducting oxides. 2015 , 15, 147-52	47

864	Multi-wavelength-driven solar spectral conversion in P2O5/ZnO/P2O glasses for improving greenhouse photosynthetic activity. 2015 , 41, 645-650	10
863	High performance ethanol/air biofuel cells with both the visible-light driven anode and cathode. 2015 , 11, 48-55	24
862	Photoinduced intramolecular reactions in triphenylamine-terrole dyads. 2015 , 296, 11-18	16
861	Synthetic Biology. 2015 ,	2
860	Advances in the biotechnology of hydrogen production with the microalga Chlamydomonas reinhardtii. 2015 , 35, 485-96	55
859	Recent progress in homogeneous multielectron transfer photocatalysis and artificial photosynthetic solar energy conversion. 2015 , 304-305, 102-108	57
858	Recent advances in photosynthetic energy conversion. 2015 , 22, 19-33	75
857	Enhanced biofuel production using optimality, pathway modification and waste minimization. 2015 , 27, 1-31	45
856	Photobiohybrid Solar Conversion with Metalloenzymes and Photosynthetic Reaction Centers. 2016 , 473-495	
855	Components of Natural Photosynthetic Apparatus in Solar Cells. 2016 ,	3
854	Overall energy conversion efficiency of a photosynthetic vesicle. 2016 , 5,	45
853	Biological and fermentative production of hydrogen. 2016 , 303-333	7
852	Morphological, Photosynthetic, and Physiological Responses of Rapeseed Leaf to Different Combinations of Red and Blue Lights at the Rosette Stage. 2016 , 7, 1144	40
851	Demonstration of a Solar Reactor for Carbon Dioxide Splitting via the Isothermal Ceria Redox Cycle and Practical Implications. 2016 , 30, 6654-6661	49
850	Current Insights to Enhance Hydrogen Production by Photosynthetic Organisms. 2016 , 461-488	2
849	Spectroscopic, Electrochemical and Computational Characterisation of Ru Species Involved in Catalytic Water Oxidation: Evidence for a [Ru(V) (O)(Py2 (Me) tacn)] Intermediate. 2016 , 22, 10111-26	20
848	Was Licht bewirken kann. 2016 , 50, 244-259	2
847	Enhanced photo-bioelectrochemical energy conversion by genetically engineered cyanobacteria. 2016 , 113, 675-9	62

846	Light-dependent chlorophyll f synthase is a highly divergent paralog of PsbA of photosystem II. <i>Science</i> , 2016 , 353,	333	107
845	Peptide-Modulated Self-Assembly of Chromophores toward Biomimetic Light-Harvesting Nanoarchitectonics. 2016 , 28, 1031-43		221
844	Solar Thermal Energy Storage in a Photochromic Macrocyclic. 2016 , 22, 10796-800		30
843	Assessment of Solar-to-Fuels Strategies: Photocatalysis and Electrocatalytic Reduction. 2016 , 4, 1369-1391		19
842	Integration of Artificial Photosynthesis System for Enhanced Electronic Energy-Transfer Efficacy: A Case Study for Solar-Energy Driven Bioconversion of Carbon Dioxide to Methanol. 2016 , 12, 4753-62		50
841	Photocatalytic Reduction of CO ₂ over Heterostructure Semiconductors into Value-Added Chemicals. 2016 , 16, 1918-33		43
840	A Dye-Sensitized Photoelectrochemical Tandem Cell for Light Driven Hydrogen Production from Water. 2016 , 138, 16745-16753		83
839	Expression of cyanobacterial FBP/SBPase in soybean prevents yield depression under future climate conditions. 2017 , 68, 715-726		43
838	Cyanobacteria as a Host Organism. 2016 , 581-604		4
837	Effect of Cross-linking on the Performance and Stability of Photocatalytic Photosystem I Films. 2016 , 222, 926-932		14
836	Photosynthetic Microbial Fuel Cells. 2016 , 158, 159-175		4
835	Solar Electricity and Solar Fuels: Status and Perspectives in the Context of the Energy Transition. 2016 , 22, 32-57		239
834	A tandem dye-sensitized photoelectrochemical cell for light driven hydrogen production. 2016 , 9, 1812-1817		45
833	Challenges and opportunities for hydrogen production from microalgae. 2016 , 14, 1487-99		97
832	Quantum confined colloidal nanorod heterostructures for solar-to-fuel conversion. 2016 , 45, 3781-810		198
831	Algal Physiology and Large-Scale Outdoor Cultures of Microalgae. 2016 , 601-652		36
830	Noble Metal-Free Copper Hydroxide as an Active and Robust Electrocatalyst for Water Oxidation at Weakly Basic pH. 2016 , 4, 2593-2600		51
829	Fuelling the future: microbial engineering for the production of sustainable biofuels. 2016 , 14, 288-304		383

828	Control of Coherences and Optical Responses of Pigment-Protein Complexes by Plasmonic Nanoantennae. 2016 , 7, 2189-96	13
827	Material constraints related to storage of future European renewable electricity surpluses with CO ₂ methanation. 2016 , 94, 366-376	39
826	Effect of Triplet State on the Lifetime of Charge Separation in Ambipolar D-A1-A2 Organic Semiconductors. 2016 , 120, 11338-11349	22
825	Elucidating the role of methyl viologen as a scavenger of photoactivated electrons from photosystem I under aerobic and anaerobic conditions. 2016 , 18, 8512-21	18
824	Technical and economic effects of cooling of monocrystalline photovoltaic modules under Hungarian conditions. 2016 , 60, 1086-1099	40
823	Fabrication of new photoanodes for solar-water-splitting photoelectrochemical cells: synergistic effect between platinum and nanocomposite photocatalysts. 2016 , 20, 51-57	1
822	A Novel Synthetic Route for the Preparation of an Amorphous Co/Fe Prussian Blue Coordination Compound with High Electrocatalytic Water Oxidation Activity. 2016 , 55, 4301-7	66
821	Can photosynthesis enable a global transition from fossil fuels to solar fuels, to mitigate climate change and fuel-supply limitations?. 2016 , 62, 134-163	56
820	Energy Supply, Thermodynamics and Territorial Processes as a New Paradigm of Sustainability in Planning Science and Practice. 2016 , 83-101	2
819	Exploiting Conformational Dynamics of Structurally Tuned Aryl-Substituted Terpyridyl Ruthenium(II) Complexes to Inhibit Charge Recombination in Dye-Sensitized Solar Cells. 2016 , 120, 10815-10829 ¹⁶	16
818	Solar Hydrogen Production Using Molecular Catalysts Immobilized on Gallium Phosphide (111)A and (111)B Polymer-Modified Photocathodes. 2016 , 8, 10038-47	41
817	Heterostructured semiconductor nanowire arrays for artificial photosynthesis. 2016 , 3, 270-282	89
816	European and International Initiatives in the Field of Artificial Photosynthesis. 2016 , 79, 193-221	1
815	Thermal performance enhancement of flat-plate and evacuated tube solar collectors using nanofluid: A review. 2016 , 76, 6-15	69
814	Biosynthesis of Chlorophyll a in a Purple Bacterial Phototroph and Assembly into a Plant Chlorophyll-Protein Complex. 2016 , 5, 948-54	23
813	Solar-Driven Water Oxidation and Decoupled Hydrogen Production Mediated by an Electron-Coupled-Proton Buffer. 2016 , 138, 6707-10	64
812	Environmental issues regarding CO ₂ and recent strategies for alternative fuels through photocatalytic reduction with titania-based materials. 2016 , 4, 3934-3953	30
811	Solar-Powered Plasmon-Enhanced Heterogeneous Catalysis. 2016 , 5, 112-133	84

810	Photoreduction of <i>Shewanella oneidensis</i> Extracellular Cytochromes by Organic Chromophores and Dye-Sensitized TiO. 2016 , 17, 2324-2333	12
809	Spectroscopic elucidation of energy transfer in hybrid inorganic-biological organisms for solar-to-chemical production. 2016 , 113, 11750-11755	81
808	Direct Conversion Artificial Photosynthesis With Cyanobacteria. 2016 , 79, 43-62	10
807	Enzymatic photosynthesis of formate from carbon dioxide coupled with highly efficient photoelectrochemical regeneration of nicotinamide cofactors. 2016 , 18, 5989-5993	56
806	Harnessing the power of microbial autotrophy. 2016 , 14, 692-706	122
805	Nanowire-Enabled Energy Conversion. 2016 , 227-254	
804	Algal Photosynthesis and Physiology. 2016 , 1-19	0
803	Dynamic Environmental Photosynthetic Imaging Reveals Emergent Phenotypes. 2016 , 2, 365-77	75
802	Spatially Separated Photosystem II and a Silicon Photoelectrochemical Cell for Overall Water Splitting: A Natural Artificial Photosynthetic Hybrid. 2016 , 128, 9375-9379	9
801	Modellierung, Simulation und Implementierung von Zellen für die solarbetriebene Wasserspaltung. 2016 , 128, 13168-13183	7
800	Analysis of the strategies for bridging the gap towards the Hydrogen Economy. 2016 , 41, 19500-19508	108
799	Whither life? Conjectures on the future evolution of biochemistry. 2016 , 12,	1
798	Catalysis of solar hydrogen production by iron atoms on the surface of Fe-doped silicon carbide. 2016 , 6, 7038-7041	5
797	The next green movement: Plant biology for the environment and sustainability. <i>Science</i> , 2016 , 353, 1241-1243	74
796	Finding the Way to Solar Fuels with Dye-Sensitized Photoelectrosynthesis Cells. 2016 , 138, 13085-13102	267
795	A General Strategy for Decoupled Hydrogen Production from Water Splitting by Integrating Oxidative Biomass Valorization. 2016 , 138, 13639-13646	416
794	Spatial inhomogeneity in spectra and exciton dynamics in porphyrin micro-rods and micro-brushes: Confocal microscopy. 2016 , 128, 1717-1724	4
793	Origin of bimodal fluorescence enhancement factors of <i>Chlorobaculum tepidum</i> reaction centers on silver island films. 2016 , 590, 2558-65	4

792	Modeling, Simulation, and Implementation of Solar-Driven Water-Splitting Devices. 2016 , 55, 12974-12988	86
791	Mimicking Ultrafast Biological Systems. 2016 , 179-197	
790	Spatially Separated Photosystem II and a Silicon Photoelectrochemical Cell for Overall Water Splitting: A Natural-Artificial Photosynthetic Hybrid. 2016 , 55, 9229-33	43
789	Sunlight-assisted, biocatalytic formate synthesis from CO ₂ and water using silicon-based photoelectrochemical cells. 2016 , 52, 9723-6	33
788	Dynamics of Electron Injection in SnO ₂ /TiO ₂ Core/Shell Electrodes for Water-Splitting Dye-Sensitized Photoelectrochemical Cells. 2016 , 7, 2930-4	49
787	Electrocatalytic and Optical Properties of Cobaloxime Catalysts Immobilized at a Surface-Grafted Polymer Interface. 2016 , 6, 8048-8057	36
786	Increased Photochemical Efficiency in Cyanobacteria via an Engineered Sucrose Sink. 2016 , 57, 2451-2460	28
785	High Oxidation State Iridium Mono-oxo Dimers Related to Water Oxidation Catalysis. 2016 , 138, 15917-15926	31
784	Single Molecule Spectroscopy of Monomeric LHCII: Experiment and Theory. 2016 , 6, 26230	10
783	Broadband emission from Ce ³⁺ /Mn ²⁺ /Yb ³⁺ tri-doped oxyfluoride glasses for glass greenhouse. 2016 , 62, 494-498	6
782	Enhancing Photoinduced Charge Separation through Donor Moiety in Donor-Acceptor Organic Semiconductors. 2016 , 120, 25263-25275	19
781	Photon management for augmented photosynthesis. 2016 , 7, 12699	142
780	A switchable self-assembling and disassembling chiral system based on a porphyrin-substituted phenylalanine-phenylalanine motif. 2016 , 7, 12657	49
779	Governing the Global Food System Towards the Sustainable with Artificial Photosynthesis. 2016 , 373-406	
778	Quinones as Reversible Electron Relays in Artificial Photosynthesis. 2016 , 17, 1321-8	22
777	Energy Storage in Strained Organic Molecules: (Spectro)Electrochemical Characterization of Norbornadiene and Quadricyclane. 2016 , 9, 1424-32	43
776	Challenges and Perspectives in Designing Artificial Photosynthetic Systems. 2016 , 22, 9870-85	57
775	A DFT study of pressure-induced phase transitions, structural and electronic properties of Cu ₂ ZnSnS ₄ . 2016 , 30, 1650176	4

- 774 The Origin of Capacity Fade in the $\text{Li}_2\text{MnO}_3/\text{LiMO}_2$ ($M = \text{Li, Ni, Co, Mn}$) Microsphere Positive Electrode: An Operando Neutron Diffraction and Transmission X-ray Microscopy Study. **2016**, 138, 8824-33 80
- 773 Mechanism and analyses for extracting photosynthetic electrons using exogenous quinones - what makes a good extraction pathway?. **2016**, 15, 969-79 16
- 772 RETRACTED: The use of nanofluids for enhancing the thermal performance of stationary solar collectors: A review. **2016**, 63, 226-236 87
- 771 Photosynthetic conversion of CO_2 to acetic acid by an inorganic-biological hybrid system. **2016**, 59, 93-94 3
- 770 Water splitting-biosynthetic system with CO_2 reduction efficiencies exceeding photosynthesis. *Science*, **2016**, 352, 1210-3 33:3 569
- 769 Environmentally relevant concentrations of microplastic particles influence larval fish ecology. *Science*, **2016**, 352, 1213-6 33:3 198
- 768 Plasmonic nanofocusing [grey holes for light. **2016**, 1, 297-330 19
- 767 Microalgal hydrogen production research. **2016**, 41, 12772-12798 85
- 766 Improvement of Biological Organisms Using Functional Material Shells. **2016**, 26, 1862-1880 60
- 765 Manganese Compounds as Water-Oxidizing Catalysts: From the Natural Water-Oxidizing Complex to Nanosized Manganese Oxide Structures. **2016**, 116, 2886-936 44:2
- 764 Resonance Energy Transfer Enables Efficient Planar Heterojunction Organic Solar Cells. **2016**, 120, 87-97 10
- 763 Biomimetic smart nanochannels for power harvesting. **2016**, 9, 59-71 39
- 762 Hierarchical Cu pillar electrodes for electrochemical CO_2 reduction to formic acid with low overpotential. **2016**, 18, 6252-8 40
- 761 First row transition metal catalysts for solar-driven water oxidation produced by electrodeposition. **2016**, 4, 6724-6741 73
- 760 Photoinduced Charge and Energy Transfer within meta- and para-Linked Chlorophyll a-Perylene-3,4:9,10-bis(dicarboximide) Donor-Acceptor Dyads. **2016**, 120, 756-65 19
- 759 Artificial photosynthesis using metal/nonmetal-nitride semiconductors: current status, prospects, and challenges. **2016**, 4, 2801-2820 95
- 758 DNA-directed spatial assembly of photosynthetic light-harvesting proteins. **2016**, 14, 1359-62 6
- 757 Retaining individualities: the photodynamics of self-ordering porphyrin assemblies. **2016**, 52, 1938-41 11

756	Achieving stable and efficient water oxidation by incorporating NiFe layered double hydroxide nanoparticles into aligned carbon nanotubes. 2016 , 1, 156-160	84
755	Natural genetic variation for morphological and molecular determinants of plant growth and yield. 2016 , 67, 2989-3001	33
754	The Costs of Photorespiration to Food Production Now and in the Future. 2016 , 67, 107-29	182
753	Cyanobacterial chassis engineering for enhancing production of biofuels and chemicals. 2016 , 100, 3401-13	60
752	Three-dimensional porous hollow fibre copper electrodes for efficient and high-rate electrochemical carbon dioxide reduction. 2016 , 7, 10748	231
751	Expression of holo-proteorhodopsin in <i>Synechocystis</i> sp. PCC 6803. 2016 , 35, 83-94	13
750	New Ir Bis-Carbonyl Precursor for Water Oxidation Catalysis. 2016 , 55, 2427-35	26
749	Functional Mode Hot Electron Transfer Theory. 2016 , 120, 20579-20587	6
748	Stratified Micellar Multilayers Toward Nanostructured Photoreactors. 2016 , 28, 2219-2228	8
747	Self-photosensitization of nonphotosynthetic bacteria for solar-to-chemical production. <i>Science</i> , 2016 , 351, 74-7	33-3 542
746	Genomics and the Bioeconomy. 2016 , 207-238	1
745	Solar energy for electricity and fuels. 2016 , 45 Suppl 1, S15-23	33
744	Mediatorless solar energy conversion by covalently bonded thylakoid monolayer on the glassy carbon electrode. 2016 , 108, 21-7	16
743	Atomic Detail Visualization of Photosynthetic Membranes with GPU-Accelerated Ray Tracing. 2016 , 55, 17-27	29
742	Photocatalytic CO ₂ Reduction. 2016 , 1-31	1
741	A multicomponent molecular approach to artificial photosynthesis - the role of fullerenes and endohedral metallofullerenes. 2016 , 45, 612-30	134
740	Solar Energy Conversion. 2016 , 245-261	
739	Pd/MgNi x nanospheres/black-TiO ₂ porous films with highly efficient hydrogen production by near-complete suppression of surface recombination. 2016 , 183, 69-74	22

738	Photochemistry. 2016 ,	2
737	Design principles of natural light-harvesting as revealed by single molecule spectroscopy. 2016 , 480, 7-13	9
736	Review of the algal biology program within the National Alliance for Advanced Biofuels and Bioproducts. 2017 , 22, 187-215	50
735	Interrogation of cobaloxime-based supramolecular photocatalyst architectures. 2017 , 20, 221-229	12
734	Embracing Biological Solutions to the Sustainable Energy Challenge. 2017 , 2, 20-51	31
733	Photocatalysis versus Photosynthesis: A Sensitivity Analysis of Devices for Solar Energy Conversion and Chemical Transformations. 2017 , 2, 445-453	137
732	Compound Homojunction:Heterojunction Reduces Bulk and Interface Recombination in ZnO Photoanodes for Water Splitting. 2017 , 13, 1603527	21
731	Expression of a clostridial [FeFe]-hydrogenase in Chlamydomonas reinhardtii prolongs photo-production of hydrogen from water splitting. 2017 , 22, 116-121	20
730	Control of Electrons' Spin Eliminates Hydrogen Peroxide Formation During Water Splitting. 2017 , 139, 2794-2798	141
729	Augmenting light coverage for photosynthesis through YFP-enhanced charge separation at the Rhodospirillum rubrum reaction centre. 2017 , 8, 13972	29
728	Earth-abundant catalysts for electrochemical and photoelectrochemical water splitting. 2017 , 1,	1885
727	Recent Progress in Energy-Driven Water Splitting. 2017 , 4, 1600337	419
726	Crucial Roles of Electron-Proton Transport Relay in the Photosystem II-Photocatalytic Hybrid System for Overall Water Splitting. 2017 , 121, 2605-2612	14
725	Retinal-Based Proton Pumping in the Near Infrared. 2017 , 139, 2338-2344	32
724	Hydrogen energy production using manganese/semiconductor system inspired by photosynthesis. 2017 , 42, 8530-8538	11
723	Photobioelectrocatalysis of Intact Chloroplasts for Solar Energy Conversion. 2017 , 7, 2257-2265	38
722	A Pyridine Alkoxide Chelate Ligand That Promotes Both Unusually High Oxidation States and Water-Oxidation Catalysis. 2017 , 50, 952-959	63
721	Integration of dye-sensitized solar cells (DSC) on photobioreactors for improved photoconversion efficiency in microalgal cultivation. 2017 , 109, 13-21	11

720	Sustainability of photosynthesis research-when research is impeded by the cults of audit and management. 2017 , 55, 391-400	2
719	Protonation equilibria of transition metal complexes: From model systems toward the Mn-complex in photosystem II. 2017 , 345, 16-30	13
718	Dynamics of non-Markovian open quantum systems. 2017 , 89,	508
717	Recent Advances in Improving Ecophysiology of Microalgae for Biofuels. 2017 , 141-162	2
716	Polyaniline film-based wireless photo reactor for hydrogen generation through exciton mediated proton reduction. 2017 , 112, 351-358	5
715	An introduction to the special issue section on The 7th International Conference on Photosynthesis and Hydrogen Energy Production in Honor of Nathan Nelson and T. Nejat Veziroglu, 1925 June 2016, Pushchino, Russia 2017 , 42, 8410-8417	0
714	Protection of Photosynthetic Algae against Ultraviolet Radiation by One-Step CeO Shellization. 2017 , 33, 2454-2459	21
713	Biomass for Heating and Power Production. 2017 , 121-148	1
712	Inorganic/whole-cell biohybrid photocatalyst for highly efficient hydrogen production from water. 2017 , 210, 400-406	30
711	Remarkably Enhancing Green-Excitation Efficiency for Solar Energy Utilization: Red Phosphors BaZnS:Eu, X Co-Doped Halide Ions (X = Cl, Br, I). 2017 , 56, 5720-5727	9
710	Metallic binary alloyed superconductors for photogenerating current from dissociated water molecules using broad light spectra. 2017 , 9, 021201	2
709	Laser induced selective photo-catalytic reduction of CO ₂ into methanol using In ₂ O ₃ -WO ₃ nano-composite. 2017 , 343, 40-50	29
708	Atomistic non-adiabatic dynamics of the LH2 complex with a GPU-accelerated ab initio exciton model. 2017 , 19, 14924-14936	48
707	Functional Expression of Gloeobacter Rhodopsin in Synechocystis sp. PCC6803. 2017 , 93, 772-781	6
706	Submolecular Gates Self-Assemble for Hot-Electron Transfer in Proteins. 2017 , 121, 6981-6988	4
705	Recent Methods for the Synthesis of Noble-Metal-Free Hydrogen-Evolution Electrocatalysts: From Nanoscale to Sub-nanoscale. 2017 , 1, 1700118	76
704	Water splitting dye-sensitized solar cells. 2017 , 14, 42-58	153
703	Direct Imaging of Exciton Transport in Tubular Porphyrin Aggregates by Ultrafast Microscopy. 2017 , 139, 7287-7293	51

702	Redesigning the Q binding site of Photosystem II allows reduction of exogenous quinones. 2017 , 8, 15274	22
701	Algal glycerol accumulation and release as a sink for photosynthetic electron transport. 2017 , 21, 161-168	8
700	Photosynthesis: Structures, Mechanisms, and Applications. 2017 ,	7
699	Fabrication of Photoreactive Biocomposite Coatings via Electric Field-Assisted Assembly of Cyanobacteria. 2017 , 33, 5304-5313	10
698	Engineering photosynthesis: a necessary tool to protect the world's climate?. 2017 , 8, 167-173	2
697	Photochemical Energy Storage and Electrochemically Triggered Energy Release in the Norbornadiene-Quadricyclane System: UV/Photochemistry and IR Spectroelectrochemistry in a Combined Experiment. 2017 , 8, 2819-2825	37
696	Exploiting non-trivial spatio-temporal correlations of thermal radiation for sunlight harvesting. 2017 , 50, 124002	
695	Perovskite oxides – a review on a versatile material class for solar-to-fuel conversion processes. 2017 , 5, 11983-12000	164
694	Performance analysis of off-grid PV systems in the Jordan Valley. 2017 , 113, 930-941	24
693	Conjugated Polymer Nanoparticles to Augment Photosynthesis of Chloroplasts. 2017 , 129, 5392-5395	30
692	Conjugated Polymer Nanoparticles to Augment Photosynthesis of Chloroplasts. 2017 , 56, 5308-5311	86
691	Enhanced Photocatalytic Water Splitting in a C N Monolayer by C-Site Isoelectronic Substitution. 2017 , 18, 1526-1532	38
690	Electrochemical Harvesting of Photosynthetic Electrons from Unicellular Algae Population at the Preparative Scale by Using 2,6-dichlorobenzoquinone. 2017 , 236, 337-342	22
689	FRET-guided surging of cyanobacterial photosystems improves and stabilizes current in photosynthetic microbial fuel cell. 2017 , 5, 7885-7895	17
688	A Synthetic Biology Approach to Engineering Living Photovoltaics. 2017 , 10, 1102-1115	57
687	Enhanced photo-catalytic activity of ordered mesoporous indium oxide nanocrystals in the conversion of CO into methanol. 2017 , 52, 785-793	10
686	Electrocatalysis of Furfural Oxidation Coupled with H ₂ Evolution via Nickel-Based Electrocatalysts in Water. 2017 , 3, 491-495	41
685	Design of energy-transducing artificial cells. 2017 , 114, 3790-3791	5

684	Low-Carbon Energy in Africa and Latin America. 2017,	4
683	Selective Electrochemical Oxidation of Lactic Acid Using Iridium-Based Catalysts. 2017, 56, 3560-3567	14
682	Harvesting the photoexcited holes on a photocatalytic proton reduction metal-organic framework. 2017, 201, 71-86	10
681	Determination of Cell Doubling Times from the Return-on-Investment Time of Photosynthetic Vesicles Based on Atomic Detail Structural Models. 2017, 121, 3787-3797	9
680	Improving artificial metalloenzymes' activity by optimizing electron transfer. 2017, 53, 4173-4186	13
679	Solar Fuels and Solar Chemicals Industry. 2017, 50, 616-619	236
678	Cyborgian Material Design for Solar Fuel Production: The Emerging Photosynthetic Biohybrid Systems. 2017, 50, 476-481	86
677	A nanostructured cell-free photosynthetic biocomposite via molecularly controlled layer-by-layer assembly. 2017, 244, 1-10	13
676	Enhanced Output from Biohybrid Photoelectrochemical Transparent Tandem Cells Integrating Photosynthetic Proteins Genetically Modified for Expanded Solar Energy Harvesting. 2017, 7, 1601821	30
675	C-Labeling the carbon-fixation pathway of a highly efficient artificial photosynthetic system. 2017, 198, 529-537	8
674	Ab initio simulations of water splitting on hematite. 2017, 29, 463002	15
673	Charge Generation in Organic Solar Cells: Interplay of Quantum Dynamics, Decoherence, and Recombination. 2017, 121, 23276-23286	10
672	Medicinal Plants and Environmental Challenges. 2017,	16
671	Toward a Practical Solar-Driven CO ₂ Flow Cell Electrolyzer: Design and Optimization. 2017, 5, 10959-10966	24
670	Water Footprint and Land Requirement of Solar Thermochemical Jet-Fuel Production. 2017, 51, 12938-12947	4
669	Understanding iridium oxide nanoparticle surface sites by their interaction with catechol. 2017, 19, 16151-16158	
668	Efficient solar-driven electrochemical CO ₂ reduction to hydrocarbons and oxygenates. 2017, 10, 2222-2230	104
667	Light-Driven H ₂ Evolution and C-C or C-O Bond Hydrogenation by <i>Shewanella oneidensis</i> : A Versatile Strategy for Photocatalysis by Nonphotosynthetic Microorganisms. 2017, 7, 7558-7566	47

666	Co-assembly of photosystem II in nanotubular indium tin oxide multilayer films templated by cellulose substance for photocurrent generation. 2017 , 5, 19826-19835	14
665	Heterologous Production of the Photosynthetic Reaction Center and Light Harvesting 1 Complexes of the Thermophile <i>Thermochromatium tepidum</i> in the Mesophile <i>Rhodobacter sphaeroides</i> and Thermal Stability of a Hybrid Core Complex. 2017 , 83,	3
664	Tuning of CO Reduction Selectivity on Metal Electrocatalysts. 2017 , 13, 1701809	136
663	Light Adaptation in Phycobilisome Antennas: Influence on the Rod Length and Structural Arrangement. 2017 , 121, 9196-9202	9
662	Red-edge position of habitable exoplanets around M-dwarfs. 2017 , 7, 7561	12
661	Bio-Optics and Bio-Inspired Optical Materials. 2017 , 117, 12705-12763	194
660	Effects of system-bath coupling on a photosynthetic heat engine: A polaron master-equation approach. 2017 , 96,	17
659	On the performance of a photosystem II reaction centre-based photocell. 2017 , 8, 6871-6880	7
658	NiS Nanosheet Flowers Decorated with CdS Quantum Dots as a Highly Active Electrocatalysis Electrode for Synergistic Water Splitting. 2017 , 9, 29660-29668	63
657	Universal Surface Engineering of Transition Metals for Superior Electrocatalytic Hydrogen Evolution in Neutral Water. 2017 , 139, 12283-12290	151
656	Photoprotection through ultrafast charge recombination in photochemical reaction centres under oxidizing conditions. 2017 , 372,	4
655	Enhancing (crop) plant photosynthesis by introducing novel genetic diversity. 2017 , 372,	14
654	Photocatalysis: Basic Principles, Diverse Forms of Implementations and Emerging Scientific Opportunities. 2017 , 7, 1700841	298
653	Photosynthesis solutions to enhance productivity. 2017 , 372,	45
652	About how to capture and exploit the CO surplus that nature, per se, is not capable of fixing. 2017 , 10, 1216-1225	6
651	Energy and economic analysis of microalgae cultivation in a photovoltaic-assisted greenhouse: <i>Scenedesmus obliquus</i> as a case study. 2017 , 140, 116-124	17
650	Generating Electric Current by Bioartificial Photosynthesis. 2019 , 167, 361-393	2
649	Photodecomposition of Metal Nitrate and Chloride Compounds Yields Amorphous Metal Oxide Films. 2017 , 139, 18174-18177	14

648	Biological-inorganic hybrid systems as a generalized platform for chemical production. 2017 , 41, 107-113	26
647	Control of electro-chemical processes using energy harvesting materials and devices. 2017 , 46, 7757-7786	98
646	Artificial Photosynthesis: Beyond Mimicking Nature. 2017 , 10, 4228-4235	42
645	Plant Nanobionics a Novel Approach to Overcome the Environmental Challenges. 2017 , 247-257	16
644	Transition metal tetrapentafluorophenyl porphyrin catalyzed hydrogen evolution from acetic acid and water. 2017 , 42, 773-782	12
643	Integrated Solar Hydrogen Devices: Cell Design and Nanostructured Components in Liquid and Vapor-Phase Water Splitting. 2017 , 907-938	
642	Redox Activity of Oxo-Bridged Iridium Dimers in an N,O-Donor Environment: Characterization of Remarkably Stable Ir(IV,V) Complexes. 2017 , 139, 9672-9683	34
641	High-performance Photon-enhanced thermionic emission solar energy converters with Al _x Ga _{1-x} As/GaAs cathode under multilevel built-in electric field. 2017 , 402, 85-90	26
640	Limits on Natural Photosynthesis. 2017 , 121, 7229-7234	6
639	Enhanced Hydrogen Production with Chiral Conductive Polymer-Based Electrodes. 2017 , 121, 15777-15783	22
638	High efficiency microbial electrosynthesis of acetate from carbon dioxide by a self-assembled electroactive biofilm. 2017 , 243, 573-582	52
637	Vibronic coupling in organic semiconductors for photovoltaics. 2017 , 19, 18813-18830	47
636	Enhanced Hydrogen Production With Chiral Conductive Polymer-Based Electrodes. 2017 ,	1
635	Adjoint master equation for quantum Brownian motion. 2017 , 95,	21
634	On thermodynamic inconsistencies in several photosynthetic and solar cell models and how to fix them. 2017 , 8, 1008-1014	16
633	Energy-Related Small Molecule Activation Reactions: Oxygen Reduction and Hydrogen and Oxygen Evolution Reactions Catalyzed by Porphyrin- and Corrole-Based Systems. 2017 , 117, 3717-3797	775
632	Rice (<i>Oryza sativa</i> L.) with reduced chlorophyll content exhibit higher photosynthetic rate and efficiency, improved canopy light distribution, and greater yields than normally pigmented plants. 2017 , 200, 58-70	52
631	Artificial photosynthetic antennas and reaction centers. 2017 , 20, 296-313	32

630	Metalloporphyrin-modified semiconductors for solar fuel production. 2017 , 8, 253-259	67
629	Protein Arrangement Effects on the Exciton Dynamics in the PE555 Complex. 2017 , 121, 3228-3236	10
628	A warm welcome for alternative CO fixation pathways in microbial biotechnology. 2017 , 10, 31-34	26
627	Self-assembly of urchin-like porphyrin/graphene microspheres for artificial photosynthetic production of formic acid from CO ₂ . 2017 , 5, 155-164	13
626	Investigation on the effect of copper doping on CdS _{1-x} Se _x thin films. 2017 , 518, 153-162	3
625	Microbial organic acid production as carbon dioxide sink. 2017 , 364,	17
624	Editorial: Assembly of the Photosystem II Membrane-Protein Complex of Oxygenic Photosynthesis. 2017 , 8, 884	9
623	Chemical Tuning and Absorption Properties of Iridium Photosensitizers for Photocatalytic Applications. 2017 , 5, 23	7
622	Chlorophyll as Photosensitizer in Dye-Sensitized Solar Cells. 2017 ,	11
621	Hybrid photosynthesis-powering biocatalysts with solar energy captured by inorganic devices. 2017 , 10, 249	22
620	Light to Hydrogen: Photocatalytic Hydrogen Generation from Water with Molecularly-Defined Iron Complexes. 2017 , 5, 14	30
619	Free-Base and Metal Complexes of 5,10,15,20-Tetrakis(NMethyl Pyridinium L)Porphyrin: Catalytic and Therapeutic Properties. 2017 ,	4
618	The design features cells use to build their transmembrane proton gradient. 2017 , 14, 013001	4
617	Biomimetic Assembly of Porphyrinoids. 2017 , 593-613	
616	A surface-display biohybrid approach to light-driven hydrogen production in air. 2018 , 4, eaap9253	77
615	Deletion of in <i>Synechocystis</i> sp. Strain PCC 6803 Allows Formation of a Far-Red-Shifted -Proteorhodopsin. 2018 , 84,	7
614	Exciton dissociation dynamics and light-driven H ₂ generation in colloidal 2D cadmium chalcogenide nanoplatelet heterostructures. 2018 , 11, 3031-3049	29
613	Engineered biosynthesis of bacteriochlorophyll g in <i>Rhodobacter sphaeroides</i> . 2018 , 1859, 501-509	14

612	In vivo assembly of a truncated H subunit mutant of the Rhodobacter sphaeroides photosynthetic reaction centre and direct electron transfer from the Q quinone to an electrode. 2018 , 137, 227-239	6
611	Simulation of the Two-Dimensional Electronic Spectroscopy and Energy Transfer Dynamics of Light-Harvesting Complex II at Ambient Temperature. 2018 , 122, 4642-4652	12
610	Cryo-EM structure of the Blastochloris viridis LH1-RC complex at 2.9 Å 2018 , 556, 203-208	57
609	In situ synthesis of a novel organic-inorganic composite as a non-noble metal electrocatalyst for the oxygen evolution reaction. 2018 , 43, 8267-8277	10
608	A Dinuclear Iridium(V,V) Oxo-Bridged Complex Characterized Using a Bulk Electrolysis Technique for Crystallizing Highly Oxidizing Compounds. 2018 , 57, 5684-5691	12
607	Interfacing Photosynthetic Membrane Protein with Mesoporous WO Photoelectrode for Solar Water Oxidation. 2018 , 14, e1800104	11
606	AgInS ₂ /In ₂ S ₃ heterostructure sensitization of Escherichia coli for sustainable hydrogen production. 2018 , 46, 234-240	50
605	Improvement in the Photobiological Hydrogen Production of Aggregated Chlorella by Dimethyl Sulfoxide. 2018 , 19, 669-673	10
604	Solar water splitting with nanostructured hematite: The role of annealing-temperature. 2018 , 266, 431-440	25
603	Optimizing the Lithium Phosphorus Oxynitride Protective Layer Thickness on Low-Grade Composite Si-Based Anodes for Lithium-Ion Batteries. 2018 , 3, 729-735	6
602	Living off the Sun: chlorophylls, bacteriochlorophylls and rhodopsins. 2018 , 56, 11-43	35
601	On the Electronic Structure of Cu Chlorophyllin and Its Breakdown Products: A Carbon K-Edge X-ray Absorption Spectroscopy Study. 2018 , 122, 1846-1851	6
600	Functionalization of P3HT-Based Hybrid Materials for Photovoltaic Applications. 2018 , 107-177	0
599	Expanding Covalent Attachment Sites of Nonnative Chromophores to Encompass the C-Terminal Hydrophilic Domain in Biohybrid Light-Harvesting Architectures. 2018 , 2, 300-313	1
598	Physical Biology of the Materials-Microorganism Interface. 2018 , 140, 1978-1985	79
597	Kinetics and mechanism of solar-thermochemical H ₂ and CO production by oxidation of reduced CeO ₂ . 2018 , 160, 178-185	28
596	Effects of pH on the photophysics of conjugated polyelectrolyte complexes. 2018 , 136, 114-120	6
595	Synthesis and characterization of a cobalt(II) tetrakis(3-fluorophenyl) porphyrin with a built-in 4-vinylphenyl surface attachment moiety. 2018 , 56, 67-74	6

594	Fabrication of Core-Shell Nanotube Array for Artificial Photosynthesis Featuring an Ultrathin Composite Separation Membrane. 2018 , 12, 533-541	19
593	Cooperative silanetriolate-carboxylate sensitiser anchoring for outstanding stability and improved performance of dye-sensitised photoelectrodes. 2018 , 2, 1707-1718	7
592	Electrospray deposition of biomolecules: Applications, challenges, and recommendations. 2018 , 125, 182-207	38
591	A photochemical diode artificial photosynthesis system for unassisted high efficiency overall pure water splitting. 2018 , 9, 1707	92
590	Shell-Thickness-Dependent Biexciton Lifetime in Type I and Quasi-Type II [email[protected]] Core/Shell Quantum Dots. 2018 , 122, 14091-14098	35
589	Prolonged and highly efficient intracellular extraction of photosynthetic electrons from single algal cells by optimized nanoelectrode insertion. 2018 , 11, 397-409	12
588	Solar-to-Hydrogen Energy Conversion Based on Water Splitting. 2018 , 8, 1701620	285
587	Water splitting based on homogeneous copper molecular catalysts. 2018 , 355, 141-151	28
586	Solar-powered CO ₂ reduction by a hybrid biological inorganic system. 2018 , 358, 411-415	17
585	Photosynthesis versus photovoltaics. 2018 , 17, 313-318	1
584	Hierarchical Cu ₂ O foam/g-C ₃ N ₄ photocathode for photoelectrochemical hydrogen production. 2018 , 427, 907-916	70
583	Photoelectrochemistry of Photosystem II in Vitro vs in Vivo. 2018 , 140, 6-9	52
582	Solar fuels and inspiration from photosynthesis. 2018 , 353, 645-653	6
581	Introduction: light harvesting for photosynthesis. 2018 , 135, 1-2	4
580	Semiconductor-Based Photoelectrochemical Conversion of Carbon Dioxide: Stepping Towards Artificial Photosynthesis. 2018 , 13, 127-142	30
579	Silicon Surface Photochemistry. 2018 , 611-620	2
578	Z-scheme solar water splitting self-assembly of photosystem I-catalyst hybrids in thylakoid membranes. 2018 , 9, 8504-8512	10
577	Reversible up-conversion luminescence modulation based on UV-VIS light-controlled photochromism in Er ³⁺ doped Sr ₂ SnO ₄ . 2018 , 6, 13148-13156	38

576	Plant Nanobionics and Its Applications for Developing Plants with Improved Photosynthetic Capacity. 2018,		7
575	The future of quantum biology. 2018, 15,		66
574	Efficient solar-driven electrocatalytic CO reduction in a redox-medium-assisted system. 2018, 9, 5003		64
573	Photocatalysis: From Fundamental Principles to Materials and Applications. 2018, 1, 6657-6693		168
572	Light-driven fine chemical production in yeast biohybrids. <i>Science</i> , 2018, 362, 813-816	33:3	147
571	Bacterial Nanobionics via 3D Printing. 2018, 18, 7448-7456		22
570	Wastewater treatment for carbon capture and utilization. 2018, 1, 750-758		115
569	Effective quenching and excited-state relaxation of a Cu(I) photosensitizer addressed by time-resolved spectroscopy and TDDFT calculations. 2018, 515, 557-563		5
568	Bacteria photosensitized by intracellular gold nanoclusters for solar fuel production. 2018, 13, 900-905		217
567	Interfacing nature's catalytic machinery with synthetic materials for semi-artificial photosynthesis. 2018, 13, 890-899		197
566	In Situ/Operando X-ray Spectroscopies for Advanced Investigation of Energy Materials. 2018, 24, 18356-18373	33	
565	Enhanced Photocurrent via Bridge Extension of Perylene monoimide-Based Dyes for p-Type Dye-Sensitized Solar Cells and Photoelectrochemical Cells. 2018, 3, 14448-14456		8
564	A genetically encoded photosensitizer protein facilitates the rational design of a miniature photocatalytic CO-reducing enzyme. 2018, 10, 1201-1206		47
563	Selective CO ₂ Reduction on 2D Mesoporous Bi Nanosheets. 2018, 8, 1801536		168
562	Biological carbon fixation: From natural to synthetic. 2018, 28, 221-227		26
561	Semi-synthetic strategy. 2018, 3, 921-922		5
560	High-light selection produces a fast-growing <i>Picochlorum celeri</i> . 2018, 36, 17-28		21
559	Enhanced Biological Photosynthetic Efficiency Using Light-Harvesting Engineering with Dual-Emissive Carbon Dots. 2018, 28, 1804004		100

558	Progress toward Commercial Application of Electrochemical Carbon Dioxide Reduction. 2018 , 4, 2571-2586	249
557	Designed for life: biocompatible de novo designed proteins and components. 2018 , 15,	19
556	Review on optofluidic microreactors for artificial photosynthesis. 2018 , 9, 30-41	20
555	Polyion Charge Ratio Determines Transition between Bright and Dark Excitons in Donor/Acceptor-Conjugated Polyelectrolyte Complexes. 2018 , 122, 22280-22293	13
554	Investigation of photocurrents resulting from a living unicellular algae suspension with quinones over time. 2018 , 9, 8271-8281	30
553	Bioinspired Ionic Diodes: From Unipolar to Bipolar. 2018 , 28, 1801079	53
552	Algal biophotovoltaic (BPV) device for generation of bioelectricity using <i>Synechococcus elongatus</i> (Cyanophyta). 2018 , 30, 2981-2988	10
551	Photosynthesis. 2018 ,	1
550	Scale-Up Technologies for Advanced Nanomaterials for Green Energy. 2018 , 433-455	9
549	Novel insights into the selection to electron's spin of chiral structure. 2018 , 52, 142-152	9
548	Electron Transfer into Electron-Accumulated Nanocrystals: Mimicking Intermediate Events in Multielectron Photocatalysis II. 2018 , 140, 10117-10120	18
547	Oriented Growth of Sc-Doped Ta ₃ N ₅ Nanorod Photoanode Achieving Low-Onset-Potential for Photoelectrochemical Water Oxidation. 2018 , 1, 4150-4157	32
546	Polymeric coatings for applications in electrocatalytic and photoelectrosynthetic fuel production. 2018 , 6, 21654-21665	20
545	Semiconducting quantum dots for artificial photosynthesis. 2018 , 2, 160-173	209
544	Biophotovoltaic Systems Based on Photosynthetic Complexes. 2018 , 43-63	1
543	"Click" Methodology for the Functionalization of Water Oxidation Catalyst Iridium Oxide Nanoparticles with Hydrophobic Dyes for Artificial Photosynthetic Constructs. 2018 , 1770, 319-334	
542	Homogeneous and heterogeneous photocatalytic water oxidation by polyoxometalates containing the most earth-abundant transition metal, iron. 2018 , 237, 1091-1100	38
541	Recent Advances in Nanowire-Biosystem Interfaces: From Chemical Conversion, Energy Production to Electrophysiology. 2018 , 4, 1538-1559	29

540	The Multiplanetary Future of Plant Synthetic Biology. 2018 , 9,	21
539	Metallic nanoparticles influence the structure and function of the photosynthetic apparatus in plants. 2018 , 130, 408-417	51
538	Enhancing photosynthesis in plants: the light reactions. 2018 , 62, 85-94	46
537	Unusually Long-Lived Photocharges in Helical Organic Semiconductor Nanostructures. 2018 , 12, 9116-9125	16
536	Electrocatalytic Upgrading of Biomass-Derived Intermediate Compounds to Value-Added Products. 2018 , 24, 18258-18270	74
535	Charge Transfer from n-Doped Nanocrystals: Mimicking Intermediate Events in Multielectron Photocatalysis. 2018 , 140, 7791-7794	33
534	Modulating oxygen vacancies in Sn-doped hematite film grown on silicon microwires for photoelectrochemical water oxidation. 2018 , 6, 15593-15602	33
533	Biomass Production: Biological Basics. 2019 , 17-52	1
532	Seawater-Mediated Solar-to-Sodium Conversion by Bismuth Vanadate Photoanode- Photovoltaic Tandem Cell: Solar Rechargeable Seawater Battery. 2019 , 19, 232-243	11
531	Spin-Correlated Radical Pairs as Quantum Sensors of Bidirectional ET Mechanisms in Photosystem I. 2019 , 123, 7536-7544	4
530	A New Light on Photosystem II Maintenance in Oxygenic Photosynthesis. 2019 , 10, 975	34
529	Excitation energy transfer with initial system-bath correlations for coherent initial conditions in a toy donor-acceptor model. 2019 , 100,	1
528	Supramolecular photocatalyst of Palladium (II) Encapsulated within Dendrimer on TiO ₂ nanoparticles for Photo-induced Suzuki-Miyaura and Sonogashira Cross-Coupling reactions. 2019 , 33, e5093	10
527	Catalytic recycling of NAD(P)H. 2019 , 199, 110777	18
526	Solar fuels production: Two-step thermochemical cycles with cerium-based oxides. 2019 , 75, 100785	60
525	Exploring natural variation of photosynthesis in a site-specific manner: evolution, progress, and prospects. 2019 , 250, 1033-1050	4
524	Spiers Memorial Lecture. Artificial photosynthesis: An introduction. 2019 , 215, 9-14	2
523	Self-Assembled Monolayers of Molybdenum Sulfide Clusters on Au Electrode as Hydrogen Evolution Catalyst for Solar Water Splitting. 2019 , 7, 79	3

522	Biomimetic light dilution using side-emitting optical fiber for enhancing the productivity of microalgae reactors. 2019 , 9, 9600	9
521	Enhanced Biological Fixation of CO ₂ Using Microorganisms. 2019 , 359-378	2
520	State of the art and challenges of biohydrogen from microalgae. 2019 , 289, 121747	38
519	Before Förster. Initial excitation in photosynthetic light harvesting. 2019 , 10, 7923-7928	24
518	Interfacial oxygen vacancies yielding long-lived holes in hematite mesocrystal-based photoanodes. 2019 , 10, 4832	61
517	CdS nanorods anchored with CoS ₂ nanoparticles for enhanced photocatalytic hydrogen production. 2019 , 588, 117281	39
516	Artificial Photosynthesis at Efficiencies Greatly Exceeding That of Natural Photosynthesis. 2019 , 52, 3143-3148	98
515	Energy transfer times in fluorographene-based biomimetic light harvesting antennae. 2019 , 527, 110477	3
514	Generalized Kasha Model: T-Dependent Spectroscopy Reveals Short-Range Structures of 2D Excitonic Systems. 2019 , 5, 3135-3150	11
513	. 2019 ,	15
512	Recent advances in dye-sensitized photoelectrochemical cells for water splitting. 2019 , 1, 100015	49
511	Quantum dynamics of vibration-assisted excitation energy transfer in phycobiliprotein light-harvesting complex. 2019 , 151, 144101	5
510	Proteoliposomes as energy transferring nanomaterials: enhancing the spectral range of light-harvesting proteins using lipid-linked chromophores. 2019 , 11, 16284-16292	12
509	Modern biomimicries. 2019 , 1, 1	
508	Does the Evolution of Complex Life Depend on the Stellar Spectral Energy Distribution?. 2019 , 19, 1292-1299	5
507	Artificial bioconversion of carbon dioxide. 2019 , 40, 1421-1437	13
506	The Self-Passivation Mechanism in Degradation of BiVO Photoanode. 2019 , 19, 976-985	27
505	Bacterial protein for food and feed generated via renewable energy and direct air capture of CO ₂ : Can it reduce land and water use?. 2019 , 22, 25-32	39

504	Computation and assessment of solar electrolyzer field performance: comparing coupling strategies. 2019 , 3, 422-430	7
503	Oxygenic photosynthesis: history, status and perspective. 2019 , 52, e1	38
502	An overview of the concept and technology of ubiquitous energy. 2019 , 238, 284-302	45
501	Artificial photosynthesis with metal and covalent organic frameworks (MOFs and COFs): challenges and prospects in fuel-forming electrocatalysis. 2019 , 166, 460-471	20
500	High-pressure control of photosynthetic excitons. 2019 , 525, 110404	3
499	Agrophotovoltaic systems: applications, challenges, and opportunities. A review. 2019 , 39, 1	89
498	Engineering opposite electronic polarization of singlet and triplet states increases the yield of high-energy photoproducts. 2019 , 116, 14465-14470	8
497	Water oxidation in photosystem II. 2019 , 142, 105-125	88
496	Structure-based control of the rate limitation of photosynthetic electron transport. 2019 , 593, 2103-2111	1
495	Enhancing bioelectricity generation in microbial fuel cells and biophotovoltaics using nanomaterials. 2019 , 12, 2184-2199	18
494	Dye activation of heterogeneous Copper(II)-Species for visible light driven hydrogen generation. 2019 , 44, 28409-28420	2
493	Making quantitative sense of electromicrobial production. 2019 , 2, 437-447	68
492	Electrical energy storage with engineered biological systems. 2019 , 13, 38	12
491	Advancement of Bio-hydrogen Production from Microalgae. 2019 , 423-462	5
490	Boosting photocatalytic hydrogen generation of cadmium telluride colloidal quantum dots by nickel ion doping. 2019 , 549, 63-71	11
489	Energy sustainable greenhouse crop cultivation using photovoltaic technologies. 2019 , 109, 116-137	62
488	Lipid production from indigenous Greek microalgae: a possible biodiesel source. 2019 , 41, 533-545	5
487	Making the case for edible microorganisms as an integral part of a more sustainable and resilient food production system. 2019 , 11, 265-278	42

486	Organic Liquids in Energy Systems. 2019 , 101-126	
485	A simple high-intensity UV-photon source for photochemical studies in UHV: Application to the photoconversion of norbornadiene to quadricyclane. 2019 , 90, 024105	7
484	Resource Economy by Metallalectrocatalysis: Merging Electrochemistry and C H Activation. 2019 , 1, 63-76	132
483	Functional Expression of Rhodopsin in PSI-Less sp. PCC6803. 2019 , 7, 67	2
482	Sustained Biexciton Populations in Nanoshell Quantum Dots. 2019 , 6, 1041-1050	10
481	Diverting photosynthetic electrons from suspensions of <i>Chlamydomonas reinhardtii</i> algae - New insights using an electrochemical well device. 2019 , 304, 465-473	5
480	Reaching full potential: bioelectrochemical systems for storing renewable energy in chemical bonds. 2019 , 57, 66-72	25
479	On the use of oxygenic photosynthesis for the sustainable production of commodity chemicals. 2019 , 166, 413-427	7
478	Artificial Thylakoid for the Coordinated Photoenzymatic Reduction of Carbon Dioxide. 2019 , 9, 3913-3925	45
477	Highly Sensitive Method to Isolate Photocurrent Signals from Large Background Redox Currents on Protein-Modified Electrodes. 2019 , 6, 2870-2875	4
476	Functional nanomaterials to augment photosynthesis: evidence and considerations for their responsible use in agricultural applications. 2019 , 9, 20180048	35
475	Excitation-energy transfer from weak to strong coupling: Role of initial system-bath correlations. 2019 , 99,	4
474	Photobiological Production of Biohydrogen: Recent Advances and Strategy. 2019 , 89-116	3
473	Photosynthesis-based hybrid nanostructures: Electrochemical sensors and photovoltaic cells as case studies. 2019 , 115, 100-109	14
472	Prospects of Renewable Bioprocessing in Future Energy Systems. 2019 ,	33
471	Light management technologies for increasing algal photobioreactor efficiency. 2019 , 39, 101433	80
470	27. Carbon dioxide utilisation by bioelectrochemical systems through microbial electrochemical synthesis. 2019 , 561-582	2
469	Photo-electrocatalytic water oxidation based on an earth-abundant metallic semiconductor-molecule hybrid photoanode. 2019 , 44, 31884-31891	5

468	One-step synthesis of ball-shaped metal complexes with a main absorption band in the near-IR region. 2019 , 9, 16528	5
467	Recent Progress and Approaches on Carbon-Free Energy from Water Splitting. 2019 , 11, 103	26
466	Structure and Efficiency in Bacterial Photosynthetic Light Harvesting. 2019 , 10, 7383-7390	15
465	Cooperativity in Bimetallic SACs: An Efficient Strategy for Designing Bifunctional Catalysts for Overall Water Splitting. 2019 , 123, 30972-30980	17
464	Molecular Cobalt Catalysts for H ₂ Generation with Redox Activity and Proton Relays in the Second Coordination Sphere. 2019 , 58, 1697-1709	27
463	Charge Transfer Dynamics in Aqueous Dye-Sensitized Photoelectrochemical Cells: Implications for Water Splitting Efficiency. 2019 , 123, 299-305	16
462	Characterization of a Laser-Based Heating System Coupled With In Operando Raman Spectroscopy for Studying Solar Thermochemical Redox Cycles. 2019 , 141,	5
461	Novel cobalt-fumarate framework as a robust and efficient electrocatalyst for water oxidation at neutral pH. 2019 , 298, 248-253	12
460	The physics and ecology of mining carbon dioxide from the atmosphere by ecosystems. 2018 , 25, 1191	72
459	Mechanisms of Self-Assembly and Energy Harvesting in Tuneable Conjugates of Quantum Dots and Engineered Photovoltaic Proteins. 2019 , 15, e1804267	10
458	Perovskite solar cells based on chlorophyll hole transporters: Dependence of aggregation and photovoltaic performance on aliphatic chains at C17-propionate residue. 2019 , 162, 763-770	13
457	Nonphotosynthetic Biological CO Reduction. 2019 , 58, 1470-1477	15
456	Energy transfer dynamics in a red-shifted violaxanthin-chlorophyll a light-harvesting complex. 2019 , 1860, 111-120	7
455	Developing Transgenic Agronomic Traits for Crops: Targets, Methods, and Challenges. 2019 , 1864, 343-365	3
454	Transgenic Plants. 2019 ,	2
453	Engineering Microorganisms for Enhanced CO Sequestration. 2019 , 37, 532-547	38
452	Combining retinal-based and chlorophyll-based (oxygenic) photosynthesis: Proteorhodopsin expression increases growth rate and fitness of a BSI strain of <i>Synechocystis</i> sp. PCC6803. 2019 , 52, 68-76	8
451	Pressure-controlled chemical vapor deposition of graphene as catalyst for solar hydrogen evolution reaction. 2019 , 335, 395-401	4

450	Increase of Co 3d projected electronic density of states in AgCoO ₂ enabled an efficient electrocatalyst toward oxygen evolution reaction. 2019 , 57, 753-760	23
449	Recent Progress in Decoupled H ₂ and O ₂ Production from Electrolytic Water Splitting. 2019 , 6, 2157-2166	25
448	Hydrogen-Mediated Electron Transfer in Hybrid Microbial/Inorganic Systems and Application in Energy and the Environment. 2019 , 7, 1800987	12
447	Solar energy: A look into power generation, challenges, and a solar-powered future. 2019 , 43, 1049-1067	72
446	Possible Industrial Applications for Microbial Electrosynthesis From Carbon Dioxide. 2019 , 825-842	4
445	Charge Transfer from Upconverting Nanocrystals to Semiconducting Electrodes: Optimizing Thermodynamic Outputs by Electronic Energy Transfer. 2019 , 141, 463-471	19
444	Highly Efficient Hydrogen Production Using a Reformed Electrolysis System Driven by a Single Perovskite Solar Cell. 2019 , 12, 434-440	9
443	Hierarchical organization of perylene bisimides and polyoxometalates for photo-assisted water oxidation. 2019 , 11, 146-153	77
442	Photonics and Optoelectronics with Bacteria: Making Materials from Photosynthetic Microorganisms. 2019 , 29, 1805521	29
441	Thylakoid membrane-based photobioelectrochemical systems: Achievements, limitations, and perspectives. 2020 , 19, 49-54	9
440	Coupling biology to synthetic nanomaterials for semi-artificial photosynthesis. 2020 , 143, 193-203	13
439	Insights into the mechanisms and dynamics of energy transfer in plant light-harvesting complexes from two-dimensional electronic spectroscopy. 2020 , 1861, 148050	28
438	Engineering cyanobacteria chassis cells toward more efficient photosynthesis. 2020 , 62, 1-6	23
437	Rational Design of Ag-Based Catalysts for the Electrochemical CO Reduction to CO: A Review. 2020 , 13, 39-58	55
436	A solar cell that breathes in moisture for energy generation. 2020 , 68, 104263	20
435	The Emergence of Plant Nanobionics and Living Plants as Technology. 2020 , 5, 1900657	39
434	A review of energy storage types, applications and recent developments. 2020 , 27, 101047	361
433	Cobalt-Electrocatalyzed C-H Activation in Biomass-Derived Glycerol: Powered by Renewable Wind and Solar Energy. 2020 , 13, 668-671	22

432	ZnCr-CO ₃ LDH/ruptured tubular g-C ₃ N ₄ composite with increased specific surface area for enhanced photoelectrochemical water splitting. 2020 , 508, 145100	25
431	Nanocluster materials in photosynthetic machines. 2020 , 385, 123951	14
430	Non-oxide semiconductors for artificial photosynthesis: Progress on photoelectrochemical water splitting and carbon dioxide reduction. 2020 , 30, 100830	42
429	Advancing photosystem II photoelectrochemistry for semi-artificial photosynthesis. 2020 , 4, 6-21	65
428	Solar Heat-Enhanced Energy Conversion in Devices Based on Photosynthetic Membranes and PEDOT:PSS-Nanocellulose Electrodes. 2020 , 4, 1900100	5
427	Metalla-electrocatalyzed C-H Activation by Earth-Abundant 3d Metals and Beyond. 2020 , 53, 84-104	238
426	Immobilized Enzymes on Graphene as Nanobiocatalyst. 2020 , 12, 250-259	29
425	Fundamental Insights into Photoelectrocatalytic Hydrogen Production with a Hole-Transport Bismuth Metal-Organic Framework. 2020 , 142, 318-326	34
424	Investigation of Zr, Gd/Zr, and Pr/Zr Doped ceria for the redox splitting of water. 2020 , 45, 160-174	13
423	Biotechnological strategies for improved photosynthesis in a future of elevated atmospheric CO ₂ . 2019 , 251, 24	9
422	A decade with quantum coherence: How our past became classical and the future turned quantum. 2020 , 532, 110663	12
421	Enhancement of Cocatalyst-Coated ZnFe ₂ O ₄ Photoanode Grown In Situ on a Metallic Iron Substrate. 2020 , 7, 4398-4404	2
420	Comparison of carbon sequestration efficacy between artificial photosynthetic carbon dioxide conversion and timberland reforestation. 2020 , 7, 1	4
419	Enhanced Photocurrent Generation From a Single-Mediated Photo-Bioelectrochemical Cell Using Wild-Type <i>Anabaena Variabilis</i> Dispersed in Solution. 2020 , 7, 4075-4083	2
418	Valorization of CO through lithoautotrophic production of sustainable chemicals in <i>Cupriavidus necator</i> . 2020 , 62, 207-220	22
417	Visible light-driven, external mediator-free H ₂ production by a combination of a photosensitizer and a whole-cell biocatalyst: <i>Escherichia coli</i> expressing [FeFe]-hydrogenase and maturase genes. 2020 , 10, 6006-6012	4
416	Coulomb Barrier for Sequential Two-Electron Transfer in a Nanoengineered Photocatalyst. 2020 , 142, 13934-13940	12
415	Size-Dependent Nickel-Based Electrocatalysts for Selective CO Reduction. 2020 , 59, 18572-18577	37

414	Size-Dependent Nickel-Based Electrocatalysts for Selective CO ₂ Reduction. 2020 , 132, 18731-18736	13
413	Ruddlesden-Popper perovskites in electrocatalysis. 2020 , 7, 2519-2565	71
412	Harnessing complex photonic systems for renewable energy. 2020 , 5, 1768898	2
411	Synergie von elektrostatischen und Wechselwirkungen für die Verwirklichung von künstlichen photosynthetischen Modellsystemen auf Nano-Ebene. 2020 , 132, 18946-18955	0
410	Synergy of Electrostatic and Interactions in the Realization of Nanoscale Artificial Photosynthetic Model Systems. 2020 , 59, 18786-18794	3
409	Structural basis of light-harvesting in the photosystem II core complex. 2020 , 29, 1090-1119	21
408	Tailored self-assembled photocatalytic nanofibres for visible-light-driven hydrogen production. 2020 , 12, 1150-1156	42
407	Recent Advances in Developing Artificial Autotrophic Microorganism for Reinforcing CO Fixation. 2020 , 11, 592631	9
406	The effect of N-heterocyclic carbene units on the absorption spectra of Fe(II) complexes: a challenge for theory. 2020 , 22, 27605-27616	5
405	Encapsulated titanium dioxide nanoparticle-Escherichia coli hybrid system improves light driven hydrogen production under aerobic condition. 2020 , 318, 124057	9
404	Anomalous behavior of H ₂ storage in photocatalytic splitting of water over Fe nanoparticles loaded on Al-modified SBA-15 composites via microwave or ultrasonic treatment routes. 2020 , 45, 24710-24725	4
403	A phytophotonic approach to enhanced photosynthesis. 2020 , 13, 4794-4807	0
402	Replacing the Calvin cycle with the reductive glycine pathway in Cupriavidus necator. 2020 , 62, 30-41	31
401	A sunlight-responsive metal-organic framework system for sustainable water desalination. 2020 , 3, 1052-1058	53
400	Carbon Recycling Through CO ₂ -Conversion for Stepping Toward a Cyclic-C Economy. A Perspective. 2020 , 8,	4
399	An investigation into the energy transfer efficiency of a two-pigment photosynthetic system using a macroscopic quantum model. 2020 , 197, 104209	2
398	Tinted Semi-Transparent Solar Panels Allow Concurrent Production of Crops and Electricity on the Same Cropland. 2020 , 10, 2001189	23
397	Synthetic biology applied to microalgae-based processes and products. 2020 , 85-98	1

396	Combining Photosynthesis and Photovoltaics: A Hybrid Energy-Harvesting System Using Optical Antennas. 2020 , 12, 40261-40268		3
395	Bionik. 2020 ,		
394	Bioelectricity production using shade macrophytes in constructed wetlands-microbial fuel cells. 2020 , 1-12		5
393	Hybrid Inorganic-Biological Systems: Faradaic and Quantum Efficiency, Necessary but Not Sufficient. 2020 , 4, 2051-2055		4
392	Optimised spectral effects of programmable LED arrays (PLA)s on bioelectricity generation from algal-biophotovoltaic devices. 2020 , 10, 16105		5
391	Progress and Prospects of Solution-Processed Two-Dimensional Semiconductor Nanocrystals. 2020 , 124, 21895-21908		19
390	Conversion of CO ₂ to chemical feedstocks over bismuth nanosheets in situ grown on nitrogen-doped carbon. 2020 , 8, 19938-19945		6
389	Molecular Scylla and Charybdis: Maneuvering between pH Sensitivity and Excited-State Localization in Ruthenium Bi(benz)imidazole Complexes. 2020 , 59, 12097-12110		8
388	Artificial regulation of state transition for augmenting plant photosynthesis using synthetic light-harvesting polymer materials. 2020 , 6, eabc5237		24
387	Toward Enhanced Fixation of CO ₂ in Aquatic Biomass: Focus on Microalgae. 2020 , 8,		6
386	Designing and understanding light-harvesting devices with machine learning. 2020 , 11, 4587		21
385	Identifying Performance-Limiting Deep Traps in Ta ₃ N ₅ for Solar Water Splitting. 2020 , 10, 10316-10324		28
384	Light harvesting in oxygenic photosynthesis: Structural biology meets spectroscopy. <i>Science</i> , 2020 , 369,	33-3	71
383	Solar Energy Harvesting with Photosynthetic Pigment-Protein Complexes. 2020 ,		0
382	Ecological impacts and limits of biomass use: a critical review. 2020 , 22, 1591-1611		10
381	The role of mixed vibronic Q-Q states in green light absorption of light-harvesting complex II. 2020 , 11, 6011		13
380	Mimicking Natural Photosynthesis: Designing Ultrafast Photosensitized Electron Transfer into Multiheme Cytochrome Protein Nanowires. 2020 , 10,		0
379	Titanium dioxide nanoparticles provoke transient increase in photosynthetic performance and differential response in antioxidant system in <i>Raphanus sativus</i> L.. 2020 , 269, 109418		15

378	Unique hole-accepting carbon-dots promoting selective carbon dioxide reduction nearly 100% to methanol by pure water. 2020 , 11, 2531	78
377	Promoting the Growth of Mung Bean Plants through Uptake and Light Conversion of NaYF ₄ :Yb,Er@CDs Nanocomposites. 2020 , 8, 9751-9762	17
376	Semi-biological approaches to solar-to-chemical conversion. 2020 , 49, 4926-4952	56
375	Natural-dye-sensitized photoelectrochemical cells for solar energy conversion. 2020 , 9, 215-226	5
374	An environmental amorphous solid by local crystallization for multifunctional optical applications. 2020 , 270, 122441	2
373	Natural Basil as Photosensitizer with ZnO Thin Films for Solar Cell Applications. 2020 , 1-8	5
372	Layer by layer assembly of a bio-inspired manganese cluster for electrocatalytic water oxidation. 2020 , 389, 207-211	0
371	Advancing the fundamental understanding and practical applications of photo-bioelectrocatalysis. 2020 , 56, 8553-8568	14
370	Hierarchically nanostructured functional materials for artificial photosynthesis. 2020 , 229-255	
369	A facile approach to synthesize CoO-Co ₃ O ₄ /TiO ₂ NAs for reinforced photoelectrocatalytic water oxidation. 2020 , 24, 941-950	2
368	Photosynthetic semiconductor biohybrids for solar-driven biocatalysis. 2020 , 3, 245-255	94
367	Light regulation of light-harvesting antenna size substantially enhances photosynthetic efficiency and biomass yield in green algae. 2020 , 103, 584-603	23
366	Room-Temperature Excitation-Emission Spectra of Single LH2 Complexes Show Remarkably Little Variation. 2020 , 11, 2430-2435	1
365	The emerging science of electrosynbionics. 2020 , 15, 033001	1
364	Supramolecular Energy Materials. 2020 , 32, e1907247	52
363	Long-Lived Photocharges in Supramolecular Polymers of Low-Band-Gap Chromophores. 2020 , 26, 9506-9517	6
362	Spectrum of Light as a Determinant of Plant Functioning: A Historical Perspective. 2020 , 10,	1
361	Nanoshell quantum dots: Quantum confinement beyond the exciton Bohr radius. 2020 , 152, 110902	13

360	CO ₂ sequestration by hybrid integrative photosynthesis (CO ₂ -SHIP): A green initiative for multi-product biorefineries. 2020 , 3, 420-428	5
359	Microalgal Torrefaction for Solid Biofuel Production. 2020 , 38, 1023-1033	36
358	Minding the Gap between Plant and Bacterial Photosynthesis within a Self-Assembling Biohybrid Photosystem. 2020 , 14, 4536-4549	9
357	Ta ₃ N ₅ -Nanorods enabling highly efficient water oxidation via advantageous light harvesting and charge collection. 2020 , 13, 1519-1530	42
356	Flexibility in the Energy Balancing Network of Photosynthesis Enables Safe Operation under Changing Environmental Conditions. 2020 , 9,	19
355	Physiological Limitations and Solutions to Various Applications of Microalgae. 2020 ,	1
354	Natural dyes in hybrid chalcogenide multi-layer thin films. 2020 , 43, 1	
353	Development of a Core/Shell Heterojunction Ta ₃ N ₅ -Nanorods/BaTaO ₂ N Photoanode for Solar Water Splitting. 2020 , 5, 2492-2497	29
352	The key role of Geobacter in regulating emissions and biogeochemical cycling of soil-derived greenhouse gases. 2020 , 266, 115135	6
351	Effect of morphology on the photoelectrochemical performance of nanostructured CuO photocathodes. 2021 , 32,	1
350	Photosynthetic Efficiency Improvement. 2020 , 256-256	
349	Basil sensitized ZnO photoelectrochemical cell for solar energy conversion. 2020 , 32, 412-416	3
348	Engineering Improved Photosynthesis in the Era of Synthetic Biology. 2020 , 1, 100032	29
347	Solar activation of fungus coated in photothermal cloth. 2020 , 8, 2466-2470	7
346	Nanomaterials and Environmental Biotechnology. 2020 ,	6
345	Nanomedicine toward 2040. 2020 , 20, 1481-1482	12
344	Growth of E. coli on formate and methanol via the reductive glycine pathway. 2020 , 16, 538-545	94
343	Theory and Simulation in Physics for Materials Applications. 2020 ,	2

342	Glacier algae accelerate melt rates on the south-western Greenland Ice Sheet. 2020 , 14, 309-330	34
341	Biopolymeric photonic structures: design, fabrication, and emerging applications. 2020 , 49, 983-1031	65
340	Hybrid nanostructures for solar-energy-conversion applications. 2020 , 9, 39-46	5
339	In Depth Analysis of Photovoltaic Performance of Chlorophyll Derivative-Based "All Solid-State" Dye-Sensitized Solar Cells. 2020 , 25,	6
338	Multifarious Chiral Nanoarchitectures Serving as Handed-Selective Fluorescence Filters for Generating Full-Color Circularly Polarized Luminescence. 2020 , 14, 3208-3218	47
337	Energy conservation in photosynthetic microorganisms. 2020 , 66, 59-65	4
336	Silver Island Film for Enhancing Light Harvesting in Natural Photosynthetic Proteins. 2020 , 21,	3
335	Gold nanoclusters cause selective light-driven biochemical catalysis in living nano-biohybrid organisms. 2020 , 2, 2363-2370	2
334	Theoretical perspective of performance-limiting parameters of Cu(In _{1-x} Ga _x)Se ₂ -based photocathodes. 2020 , 8, 9194-9201	9
333	Implementation of agrophotovoltaics: Techno-economic analysis of the price-performance ratio and its policy implications. 2020 , 265, 114737	61
332	A review of high value-added molecules production by microalgae in light of the classification. 2020 , 41, 107545	114
331	Polychromatic solar energy conversion in pigment-protein chimeras that unite the two kingdoms of (bacterio)chlorophyll-based photosynthesis. 2020 , 11, 1542	12
330	Humanity's Fundamental Environmental Limits. 2020 , 48, 235-244	1
329	Material-Microbe Interfaces for Solar-Driven CO Bioelectrosynthesis. 2020 , 38, 1245-1261	40
328	Far-Red Carbon Dots as Efficient Light-Harvesting Agents for Enhanced Photosynthesis. 2020 , 12, 21009-21019	41
327	Trimetallic NiCoFe-Layered Double Hydroxides Nanosheets Efficient for Oxygen Evolution and Highly Selective Oxidation of Biomass-Derived 5-Hydroxymethylfurfural. 2020 , 10, 5179-5189	117
326	Electrochemical syngas production from CO ₂ and water with CNT supported ZnO catalysts. 2021 , 364, 172-181	2
325	Versatility of algae—exploring the potential of algae for nutrient circulation. 2021 , 11, 251-260	4

324	Improvement of organisms by biomimetic mineralization: A material incorporation strategy for biological modification. 2021 , 120, 57-80	11
323	New 3-D Mn(II) coordination polymer with redox active oxalate linker; an efficient and robust electrocatalyst for oxygen evolution reaction. 2021 , 514, 119982	1
322	Photoactive Conjugated Polymer-Based Hybrid Biosystems for Enhancing Cyanobacterial Photosynthesis and Regulating Redox State of Protein. 2021 , 31, 2007814	10
321	Recent progress in genetically modified microalgae for enhanced carbon dioxide sequestration. 2021 , 145, 105927	39
320	Understanding and Controlling the Performance-Limiting Steps of Catalyst-Modified Semiconductors. 2021 , 12, 199-203	1
319	Energy transduction through FRET in self-assembled soft nanostructures based on surfactants/polymers: current scenario and prospects. 2021 , 17, 425-446	4
318	Multiscale modeling and cinematic visualization of photosynthetic energy conversion processes from electronic to cell scales. 2020 , 102,	4
317	Tm ³⁺ /Cr ³⁺ Codoped Dual-Phase Transparent Glass-Ceramics for Light Conversion in Photosynthesis. 2021 , 2, 2000117	0
316	Engineering Photosynthetic Bioprocesses for Sustainable Chemical Production: A Review. 2020 , 8, 610723	5
315	Perspectives and state of the art in producing solar fuels and chemicals from CO ₂ . 2021 , 181-219	0
314	CHAPTER 16:Artificial Photosynthesis by 3D Graphene-based Composite Photocatalysts. 2021 , 396-431	
313	Probing fundamental losses in nanostructured Ta ₃ N ₅ photoanodes: design principles for efficient water oxidation. 2021 , 14, 4038-4047	9
312	Anchoring Ir(III) complex on macroscopic polymer substrate as highly durable photosensitizer for photocatalytic hydrogen evolution. 2021 , 57, 3857-3860	2
311	Semiconductor photocatalysts and mechanisms of the carbon dioxide reduction and molecular nitrogen fixation under UV- and visible light irradiation. 2021 , 90,	0
310	Bioinspired solar cells: contribution of biology to light harvesting systems. 2021 , 593-632	0
309	Photosynthesis Algal Hydrogen Production. 2021 , 365-374	
308	Ammonium ion-promoted electrochemical production of synthetic gas from water and carbon dioxide on a fluorine-doped tin oxide electrode. 2021 , 57, 1438-1441	1
307	Ar plasma-assisted P-doped NiS with S vacancies for efficient electrocatalytic water splitting. 2021 , 50, 2007-2013	5

306	Effect of Trehalose on the Functional Properties of Photosystem II. 2021 , 447-464	
305	Feasibility of Sustainable Photosynthetic Hydrogen Production. 2021 , 567-587	
304	Natural Cellulose Substance Based Energy Materials. 2021 , 16, 378-396	4
303	Thermally activated delayed fluorescence materials as organic photosensitizers. 2021 , 57, 10675-10688	2
302	Helical polymer self-assembly and chiral nanostructure formation. 2021 , 12, 1857-1897	13
301	Crossover between the adiabatic and nonadiabatic electron transfer limits in the Landau-Zener model. 2021 , 12, 456	5
300	Reprogramming Metabolic Networks and Manipulating Circadian Clocks for Biotechnological Applications. 2021 , 259-296	
299	Plasmon Hybridization-Induced Ultra-broadband High Absorption from 0.4 to 1.8 Microns in Titanium Nitride Metastructures. 2021 , 16, 799-809	3
298	Toward Molecular Mechanisms of Solar Water Splitting in Semiconductor/Manganese Materials and Photosystem II. 2021 , 105-129	1
297	Exogenous electricity flowing through cyanobacterial photosystem I drives CO ₂ valorization with high energy efficiency.	4
296	Applications of CRISPR/Cas Beyond Simple Traits in Crops. 2021 , 231-260	
295	Do photosynthetic complexes use quantum coherence to increase their efficiency? Probably not. 2021 , 7,	6
294	Valorization of Biomass Power Generation System: Noble Use of Combustion and Integration with Energy Storage. 2021 , 35, 3715-3730	10
293	Polymeric Carbon Nitride-Derived Photocatalysts for Water Splitting and Nitrogen Fixation. 2021 , 17, e2005149	15
292	Biofuels for a sustainable future. 2021 , 184, 1636-1647	32
291	Earth-Abundant Electrocatalysts for Water Splitting: Current and Future Directions. 2021 , 11, 429	5
290	Electron Transport in Cyanobacteria and Its Potential in Bioproduction. 2021 , 33-63	1
289	Optimizing the Spectral Fit Between Cyanobacteria and Solar Radiation in the Light of Sustainability Applications. 2021 , 65-88	1

288	Interfacing Iodine-Doped Hydrothermally Carbonized Carbon with Escherichia coli through an Add-on Mode for Enhanced Light-Driven Hydrogen Production. 2021 , 11, 2100291	8
287	Metabolic Engineering of Cupriavidus necator H16 for Sustainable Biofuels from CO. 2021 , 39, 412-424	20
286	Nanoarray Structures for Artificial Photosynthesis. 2021 , 17, e2006530	7
285	Electrolyzer and Catalysts Design from Carbon Dioxide to Carbon Monoxide Electrochemical Reduction. 1	6
284	Influence of the coupled-dipoles on photosynthetic performance in a photosynthetic quantum heat engine*. 2021 , 30, 044215	1
283	Inorganic Carbon Assimilation in Cyanobacteria: Mechanisms, Regulation, and Engineering. 2021 , 1-31	2
282	Rotor subunits adaptations in ATP synthases from photosynthetic organisms. 2021 , 49, 541-550	4
281	GaAs solar cell performance improvement by design optimization using NSGA approach. 2021 , 51, 178-178	0
280	Electropolymerization of cobalt porphyrins and corroles for the oxygen evolution reaction. 2021 ,	4
279	Influence of Ga-halogen bond formation at the interface of nanoporous GaN photoelectrodes for enhanced photoelectrochemical water splitting efficiency. 2021 , 547, 149105	3
278	Merging Biology and Photovoltaics: How Nature Helps Sun-Catching. 2100520	2
277	Photovoltaic-driven microbial protein production can use land and sunlight more efficiently than conventional crops. 2021 , 118,	12
276	Interfacial electron transfer for carbon dioxide valorization in hybrid inorganic-microbial systems. 2021 , 292, 116885	7
275	Kinetic and Thermodynamic Considerations for Photocatalyst Design. 2021 , 1-27	
274	Picochlorum celeri as a model system for robust outdoor algal growth in seawater. 2021 , 11, 11649	10
273	Nano- and Microscale Optical and Electrical Biointerfaces and Their Relevance to Energy Research. 2021 , 17, e2100165	4
272	Ultra-broadband high solar absorption in checkerboard-shaped titanium nitride plasmonic metastructures. 2021 , 116, 111117	2
271	Unbranched Hybrid Conducting Redox Polymers for Intact Chloroplast-Based Photobioelectrocatalysis. 2021 ,	4

270	Hierarchical Control of Space Closed Ecosystems: Expanding Microgrid Concepts to Bioastronautics. 2021 , 15, 16-27	3
269	Integrating heteromixed Cu ₂ O/CuO photocathode interface through a hydrogen treatment for photoelectrochemical hydrogen evolution reaction. 2021 , 551, 149375	6
268	Photosynthesis research under climate change. 2021 , 150, 5-19	17
267	Progress toward a bicarbonate-based microalgae production system. 2021 ,	6
266	Whole-Cell-Based Photosynthetic Biohybrid Systems for Energy and Environmental Applications. 2021 , 86, 1021-1036	3
265	Photosystem II. 2, 1-16	4
264	Empowering smart grid: A comprehensive review of energy storage technology and application with renewable energy integration. 2021 , 39, 102591	44
263	Synthesis and photoinduced charge stabilization in molecular tetrads featuring covalently linked triphenylamine-oligothiophene-BODIPY-C60. 2021 , 133, 1	1
262	A comparative life cycle analysis of electromicrobial production systems.	0
261	Unassisted Photoelectrochemical Cell with Multimediator Modulation for Solar Water Splitting Exceeding 4% Solar-to-Hydrogen Efficiency. 2021 , 143, 12499-12508	41
260	Band-Gap-Engineered Transparent Perovskite Solar Modules to Combine Photovoltaics with Photosynthesis. 2021 , 13, 39230-39238	1
259	Recent Advances in Algal Biomass Production.	3
258	Finding Adapted Quinones for Harvesting Electrons from Photosynthetic Algae Suspensions. 2021 , 8, 2968-2978	2
257	Harnessing Solar Energy using Phototrophic Microorganisms: A Sustainable Pathway to Bioenergy, Biomaterials, and Environmental Solutions. 2021 , 146, 1-111181	4
256	Hydrogen Peroxide Production from Oxygen and Water by Two-electrode Electrolytic Cell Using a Gold Nanoparticle-loaded Fluorine-doped Tin Oxide Cathode. 2021 , 50, 1589-1591	0
255	Oxidative torrefaction performance of microalga <i>Nannochloropsis Oceanica</i> towards an upgraded microalgal solid biofuel. 2021 , 338, 81-90	3
254	Photo-bioelectrocatalytic CO ₂ reduction for a circular energy landscape. 2021 ,	10
253	A chemical evolution-like method to synthesize a water-oxidizing catalyst.	0

252	Water-Assisted Chemical Route Towards the Oxygen Evolution Reaction at the Hydrated (110) Ruthenium Oxide Surface: Heterogeneous Catalysis via DFT-MD and Metadynamics Simulations. 2021 , 27, 17024-17037	2
251	Gold Nanoparticle Interaction in Algae Enhancing Quantum Efficiency and Power Generation in Microphotosynthetic Power Cells. 2100135	2
250	Pushing the methodological envelope in understanding the photo/electrosynthetic materials-microorganism interface. 2021 , 24, 103049	0
249	Storing sunlight at low temperatures?. 2021 , 5, 2254-2256	0
248	Synthetic Biology Approaches To Enhance Microalgal Productivity. 2021 , 39, 1019-1036	11
247	Macromolecular strategies for transporting electrons and excitation energy in ordered polymer layers. 2021 , 121, 101433	4
246	Solar-driven biological inorganic hybrid systems for the production of solar fuels and chemicals from carbon dioxide. 2021 , 150, 111375	8
245	Bio-conversion of CO into biofuels and other value-added chemicals via metabolic engineering. 2021 , 251, 126813	6
244	Enhancing bioenergy production with carbon capture of microalgae by ultraviolet spectrum conversion via graphene oxide quantum dots. 2022 , 429, 132230	5
243	Dye-sensitized solar cells strike back. 2021 , 50, 12450-12550	38
242	The kinetic models in electron transfer processes in colloidal semiconductor photocatalysis. 2021 , 375-441	
241	Enhancing Nature. 2021 , 193-218	
240	Evaluation of photoanode materials used in biophotovoltaic systems for renewable energy generation. 2021 , 5, 4209-4232	3
239	Artificial Photosynthesis: Is Computation Ready for the Challenge Ahead?. 2021 , 11,	2
238	Thickness-induced band-gap engineering in lead-free double perovskite CsAgBiBr for highly efficient photocatalysis. 2021 , 23, 12439-12448	5
237	NADPH performs mediated electron transfer in cyanobacterial-driven bio-photoelectrochemical cells. 2021 , 24, 101892	12
236	Molecular Systems for Solar Thermal Energy Storage and Conversion. 179-196	7
235	Effect of Nanoparticles on Plant Growth and Physiology and on Soil Microbes. 2020 , 65-85	2

234	Architecture and Function of Biohybrid Solar Cell and Solar-to-Fuel Nanodevices. 2020 , 227-274	1
233	Biohydrogen from Microalgae. 2016 , 165-193	2
232	Techno-economics of Algal Biodiesel. 2016 , 111-141	4
231	Artificial Photosynthesis: From Molecular to Hybrid Nanoconstructs. 2015 , 71-98	3
230	The Industrial Ecology of the Automobile. 2016 , 331-341	2
229	Photosynthesis: Natural Nanomachines Toward Energy and Food Production. 2017 , 1-9	2
228	Concluding Remarks and Future Perspectives: Looking Back and Moving Forward. 2017 , 407-414	3
227	Brown Dwarfs and Black Smokers: The Potential for Photosynthesis Using Radiation from Low-Temperature Black Bodies. 2013 , 267-284	6
226	Hydrogen Production by Water Biophotolysis. 2014 , 101-135	11
225	Understanding and harnessing hydrogenases, biological dihydrogen catalysts. 2014 , 14, 99-124	6
224	Current Trends in Development of Photosynthetic Bioelectrochemical Systems for Light Energy Conversion. 2020 , 123-146	2
223	A multi-pathway model for photosynthetic reaction center. 2016 , 144, 125103	7
222	Ultrathin oxide layers for nanoscale integration of molecular light absorbers, catalysts, and complete artificial photosystems. 2019 , 150, 041501	5
221	Structure, Dynamics, and Function in the Major Light-Harvesting Complex of Photosystem II. 2012 , 65, 583	7
220	Photosynthetic pigment-protein complexes as highly connected networks: implications for robust energy transport. 2017 , 473, 20170112	7
219	Valorization of CO ₂ through lithoautotrophic production of sustainable chemicals in <i>Cupriavidus necator</i> .	1
218	Replacing the Calvin cycle with the reductive glycine pathway in <i>Cupriavidus necator</i> .	2
217	Systems-informed genome mining for electroautotrophic microbial production.	3

216	Engineering photosynthesis: progress and perspectives. 2017 , 6, 1891	22
215	Disorder-Assisted Exciton Transport. 2011 , 120, A-89-A-94	2
214	Light-Harvesting in Photosynthesis. 2012 , 122, 247-251	2
213	Silicon based photoelectrodes for photoelectrochemical water splitting. 2019 , 27, A51-A80	41
212	Quantum transport in networks and photosynthetic complexes at the steady state. 2013 , 8, e57041	37
211	Boosting Photoelectrochemical Water Oxidation of Hematite by Surface States Modification.	1
210	LETTER TO EDITORLight regulation of photosynthetic light harvesting doubles the biomass yield in the green alga <i>Chlamydomonas</i> . 2020 , 58, 974-975	4
209	Efficiency of use of photosynthetically active radiation in winter wheat crops. 2019 , 2019, 23-34	3
208	Limitations to photosynthesis by proton motive force-induced photosystem II photodamage. 2016 , 5,	61
207	The Peptidisc, a simple method for stabilizing membrane proteins in detergent-free solution. 2018 , 7,	68
206	Current density in solar fuel technologies.	11
205	Introduction: Solar Cell Efficiency and Routes Beyond Current Limits. 2022 , 1-6	
204	Dark Food: Feeding People In Space Without Photosynthesis.	
203	Designing of noble metal free high performance mesoporous electrocatalysts for water splitting. 2021 ,	2
202	Ultrathin MOF Coupling with Molecular Cobaloxime to Construct an Efficient Hybrid Hematite Photoanode for Photocatalytic Water Splitting. 2021 , 125, 23153-23161	3
201	Adsorption desalination: Advances in porous adsorbents. 2021 ,	1
200	Accurate prediction of mutation-induced frequency shifts in chlorophyll proteins with a simple electrostatic model. 2021 , 155, 151102	2
199	Cobalt doping boosted electrocatalytic activity of CaMn_3O_6 for hydrogen evolution reaction. 1	1

- 198 Engineering microbial metabolic energy homeostasis for improved bioproduction. **2021**, 53, 107841 1
- 197 References. 453-500
- 196 Biomass. **2013**, 37-62
- 195 Turning Sunlight into Fuels: Photocatalysis for Energy. **2013**, 67-84
- 194 LESSONS OF PHOTOSYNTHESIS FOR NANOTECHNOLOGIES. **2013**,
- 193 ABC of Climate Science. **2014**, 35-54
- 192 Non-fossil Energy Sources. **2014**, 69-95
- 191 Hydrogen and Biofuel Production in the Chloroplast. **2014**, 559-585
- 190 Nonequilibrium Quantum Dynamics of Biomolecular Excitons. **2014**, 61-78
- 189 Energy Changes in Photosynthetic Electron Transport: Probing Photosynthesis by Pulsed Photoacoustics. **2014**, 171-190
- 188 Nanotechnology, Plasma, Hydrogen from Artificial Photosynthesis, and Fuel Cells: Powering the Developing World to the Sustainocene. **2014**, 273-290
- 187 Environmental Sustainability of Biofuel Production from Algae. **2015**, 89-93
- 186 Molecular Mechanisms for the Biological Storage of Renewable Energy. 0
- 185 Introduction. **2017**, 1-75
- 184 1 Photosynthesis to Solar Fuels: An Introduction. **2016**, 1-8
- 183 6 Solar Bio-Hydrogen Production: An Overview. **2016**, 121-140
- 182 Encyclopedia of Sustainability Science and Technology. **2017**, 1-36
- 181 Solar-based Synthesis of Organic Chemicals from CO₂ and Water. **2017**, 38, 286-290

180 A Robust PS II Mimic: Using Manganese/Tungsten Oxide Nanostructures for Photo Water Splitting. **2017**, 343-358

179 Monolithic Solar Seawater Battery: Seawater-Mediated Solar-to-Sodium Conversion with 8.0 % Efficiency by Bismuth Vanadate Photoanode - Photovoltaic Tandem Cell.

178 PROSPECTS OF USING DIFFERENT GENERATIONS BIOFUELS FOR MINIMIZING IMPACT OF MODERN AVIATION ON ENVIRONMENT. **2018**, 10-20

177 Photosynthese: Das biologische Vorbild. **2019**, 39-67

1

176 Modifizierte Photosynthese: Neue Algen und Cyanoakterien. **2019**, 69-80

175 Optimization of Microalgae Photosynthetic Metabolism to Close the Gap with Potential Productivity. **2019**, 223-248

1

174 The Self-Passivation Mechanism in Degradation of BiVO 4 Photoanode.

173 Polychromatic solar energy conversion in pigment-protein chimeras that unite the two kingdoms of (bacterio)chlorophyll-based photosynthesis.

172 Electrical Energy Storage with Engineered Biological Systems.

171 Proteoliposomes as energy transferring nanomaterials: enhancing the spectral range of light-harvesting proteins using lipid-linked chromophores.

170 Redesigning the photosynthetic light reactions to enhance photosynthesis - the PhotoRedesign consortium. **2021**,

1

169 Photoelectrochemical (PEC) Energy Conversion with Single Atoms. **2022**, 787-813

168 Biomineralization. **2021**,

167 Core/Shell Quantum-Dot-Based Solar-Driven Photoelectrochemical Cells. **2020**, 257-286

0

166 The Multifaceted Connections Between Photosynthesis and Respiratory Metabolism. **2020**, 55-107

165 Biokatalytische Konversion. **2020**, 99-119

164 Alternative biologische und biotechnologische Verfahren zur Wasserstoffherstellung. **2020**, 39-58

163 Introduction. **2020**, 1-25

162	n-Butanol production by Rhodospseudomonas palustris TIE-1. 2021 , 4, 1257	2
161	O and Other High-Energy Molecules in Photosynthesis: Why Plants Need Two Photosystems. 2021 , 11,	1
160	Sustainable Production of the Biofuel n-Butanol by Rhodospseudomonas palustris TIE-1.	3
159	Harnessing solar radiation for potential algal biomass production. 2022 , 421-449	0
158	The role of the surface acidic/basic centers and redox sites on TiO ₂ in the photocatalytic CO ₂ reduction. 2022 , 303, 120931	3
157	Thermodynamically controlled photo-electrochemical CO ₂ reduction at Cu/rGO/PVP/Nafion multi-layered dark cathode for selective production of formaldehyde and acetaldehyde. 2022 , 303, 120921	4
156	Bio-sensitized solar cells built from renewable carbon sources. 2021 , 23, 100910	0
155	D-Band EPR and ENDOR Spectroscopy of ¹⁵ N-Labeled Photosystem I. 1	0
154	Halogen-Manipulated Interfacial Charge Transport of π -Conjugated Molecule-Lead Halide Hybrids.	0
153	Bioinspired Artificial Photosynthetic Systems. 2021 ,	1
152	Energetics of the Earth. 2021 , 89-131	
151	Predicting Molecular Photochemistry Using Machine-Learning-Enhanced Quantum Dynamics Simulations.. 2022 ,	2
150	Asymmetrical interface design for unidirectional light extraction from spectrum conversion films.. 2022 , 30, 4642-4654	1
149	Observation of robust energy transfer in the photosynthetic protein allophycocyanin using single-molecule pump-probe spectroscopy.. 2022 ,	4
148	Panoramic insights into semi-artificial photosynthesis: origin, development, and future perspective.	1
147	Extracellular Electrons Powered Microbial CO Upgrading: Microbial Electrosynthesis and Artificial Photosynthesis.. 2022 ,	
146	Proton-Coupled Electron Transfer: The Engine of Energy Conversion and Storage.. 2022 ,	8
145	Transforming Escherichia coli Proteomembranes into Artificial Chloroplasts Using Molecular Photocatalysis.	

144	Design of Biomimetic Photocatalysts for the Solar Hydrogen Generation: An Overview. 2022 , 91-115	
143	Systems-informed genome mining for electroautotrophic microbial production.. 2022 , 145, 108054	0
142	Controlling electrocatalytic, photoelectrocatalytic, and load release processes using soft material-modified electrodes. 2022 , 904, 115926	0
141	Structure and chlorophyll fluorescence of heteroblastic foliage affect first-year growth in Pinus massoniana Lamb. seedlings.. 2021 , 170, 206-217	0
140	Dark Food: Feeding People in Space Without Photosynthesis.	0
139	Achieving a Carbon Neutral Future through Advanced Functional Materials and Technologies. 2022 , 95, 73-103	3
138	Energetics of the charge generation in organic donor-acceptor interfaces.. 2022 , 156, 024104	1
137	Transforming Escherichia coli Proteomembranes into Artificial Chloroplasts Using Molecular Photocatalysis.. 2021 ,	0
136	Improved polyhydroxybutyrate production by Cupriavidus necator and the photocatalyst graphitic carbon nitride from fructose under low light intensity.. 2022 , 203, 526-534	1
135	Toward a zero-waste model: Potential for microorganism growth on agricultural waste products in Hawaii. 2022 , 62, 102640	
134	Enhanced production of microalgae-originated photosensitizer by integrating photosynthetic electrons extraction and antibiotic induction towards photocatalytic degradation of antibiotic: A novel complementary treatment process for antibiotic removal from effluent of conventional biological wastewater treatment.. 2022 , 308, 114527	0
133	Interface engineering of TaN thin film photoanode for highly efficient photoelectrochemical water splitting.. 2022 , 13, 729	13
132	Problems in Global Atmospheric Energetics of the Atmosphere. 2021 , 59, 207-218	
131	Engineering the Reductive Glycine Pathway: A Promising Synthetic Metabolism Approach for C1-Assimilation.. 2022 , 1	0
130	Insights into soybean with high photosynthetic efficiency. 2022 ,	
129	?????????????????. 2022 ,	
128	Spectral Dependence of the Energy Transfer from Photosynthetic Complexes to Monolayer Graphene.. 2022 , 23,	0
127	Sustaining Electron Transfer Pathways Extends Biohybrid Photoelectrode Stability to Years.. 2022 ,	1

126	Geoinformatics and Nanotechnological Approaches for Coping Up Abiotic and Biotic Stress in Crop Plants. 2022 , 337-359	
125	Electronic Engineering of ABO ₃ Perovskite Metal Oxides Based on d ⁰ Electronic-Configuration Metallic Ions toward Photocatalytic Water Splitting under Visible Light. 2100226	2
124	Sustaining Electron Transfer Pathways Extends Biohybrid Photoelectrode Stability to Years.	
123	Atomistic insights into highly active reconstructed edges of monolayer 2H-WSe photocatalyst.. 2022 , 13, 1256	6
122	Recent Progress on Semiconductor Heterojunction-Based Photoanodes for Photoelectrochemical Water Splitting. 2100112	10
121	Solar-Driven Producing of Value-Added Chemicals with Organic Semiconductor-Bacteria Biohybrid System.. 2022 , 2022, 9834093	2
120	Arraying of microphotosynthetic power cells for enhanced power output.. 2022 , 8, 29	0
119	Highly Active and Renewable Catalytic Electrodes for Two-Electron Oxygen Reduction Reaction.. 2022 ,	1
118	Carbon flux through photosynthesis and central carbon metabolism show distinct patterns between algae, C ₃ and C ₄ plants.. 2021 ,	2
117	General Background in Ecology and Environmental Sciences. 2022 , 1-79	
116	A kaleidoscope of photosynthetic antenna proteins and their emerging roles.. 2022 ,	0
115	Strategies and reaction systems for solar-driven CO ₂ reduction by water. 2022 , 1, 1	1
114	Fluorographene with impurities as a biomimetic light-harvesting medium.. 2022 , 156, 185102	1
113	In-situ energy budget of needle-leaves reveals shift from evaporative to air cooling under drought.	
112	Photocatalytic materials applications for sustainable agriculture. 2022 , 100965	1
111	22.8% efficient ion implanted PERC solar cell with a roadmap to achieve 23.5% efficiency: A process and device simulation study. 2022 , 128, 112399	1
110	Concerted Electron-Nuclear Motion in Proton-Coupled Electron Transfer-Driven Grotthuss-Type Proton Translocation.. 2022 , 4479-4485	0
109	The 2022 Solar Fuels Roadmap.	3

- 108 Electrocatalysis with metal-free carbon-based catalysts. **2022**, 213-244
- 107 Spatial decoupling boosts CO₂ electro-biofixation. **2022**, 5, 357-358 0
- 106 Enhancing Photosynthetic Efficiency of Crop Through Metabolic Engineering. **2022**, 61-89
- 105 Quantum Effects in Biological Systems. **2022**, 201-247
- 104 A comparative life cycle analysis of electromicrobial production systems. 0
- 103 Metal chalcogenide-based photoelectrodes for photoelectrochemical water splitting. **2022**, 1
- 102 Interplay between hydrogen production and photosynthesis in a green alga expressing an active photosystem I-hydrogenase chimera. **2022**, 0
- 101 Photochemistry of Metal-Organic Frameworks. **2022**, 691-732
- 100 Engineering nonphotosynthetic carbon fixation for production of bioplastics by methanogenic archaea. **2022**, 119, 0
- 99 A hybrid inorganicBiological artificial photosynthesis system for energy-efficient food production. **2022**, 3, 461-471 3
- 98 Artificial photosynthesis of food from CO₂. **2022**, 3, 409-410 0
- 97 Preparation of Photo-Bioelectrochemical Cells With the RC-LH Complex From *Roseiflexus castenholzii*. 13,
- 96 Antimony-Doped Tin Oxide Catalysts for Green and Sustainable Chemistry. 1
- 95 A mini review on microwave and contemporary based biohydrogen production technologies: a comparison.
- 94 Ground-Mounted Photovoltaic and Crop Cultivation: A Comparative Analysis. **2022**, 14, 8607 0
- 93 Flexible Color Tunability and High Transmittance Semitransparent Organic Solar Cells. 2200441 1
- 92 An ElectroMicrobial Process to Uncouple Food Production from Photosynthesis for Application in Space Exploration. **2022**, 12, 1002 0
- 91 Mimicking the Oxygen-Evolving Center in Photosynthesis. 13,

90	A Year at the Forefront of Engineering Photosynthesis. 2022 , 11,	1
89	Nanomaterials for enhancing photosynthesis: interaction with plant photosystems and scope of nanobionics in agriculture.	0
88	Conversion of CO ₂ to Fuels. 2022 ,	
87	Enhancing the light reactions of photosynthesis: strategies, controversies and perspectives. 2022 ,	0
86	Enhanced Growth of Microalgae and Production of Lipids via Electrostatically Controlled Photosynthesis.	
85	Protein Design: From the Aspect of Water Solubility and Stability.	7
84	De novo protein design of photochemical reaction centers. 2022 , 13,	1
83	Advancement of wastewater bioremediation technologies via artificial and microalgae photosynthesis. 2022 , 127830	3
82	Three-dimensional bioprinting: A cutting-edge tool for designing and fabricating engineered living materials. 2022 , 140, 213053	0
81	Application of flashing blue-red LED to boost microalgae biomass productivity and energy efficiency in continuous photobioreactors. 2022 , 259, 125087	2
80	Effective Charge Carrier Utilization of BiVO ₄ for Solar Overall Water Splitting.	0
79	Light-responsive nanochannels based on the supramolecular host-guest system. 10,	0
78	Using synthetic biology to improve photosynthesis for sustainable food production. 2022 , 359, 1-14	0
77	Natural xylose-derived carbon dots towards efficient semi-artificial photosynthesis. 2023 , 629, 12-21	1
76	Natural Leaf-Inspired Solar Water Splitting System.	0
75	A novel supramolecular self-assembling hybrid system for visible-light-driven overall water splitting. 2022 , 6, 2790-2795	0
74	Transition Metal Quantum Dots for the Electrocatalytic Hydrogen Evolution Reaction: Recent Progress and Challenges.	0
73	Photosynthesis. 2022 ,	0

72	An approach to nearest neighbor analysis of pigment-protein complexes using chemical cross-linking in combination with mass spectrometry. 2022,	1
71	Seed layer-free hydrothermal synthesis of porous tungsten trioxide nanoflake arrays for photoelectrochemical water splitting. 2022, 12, 26099-26105	0
70	Energy transfer dynamics and the mechanism of biohybrid photosynthetic antenna complexes chemically linked with artificial chromophores.	0
69	Lichtgetriebene in vitro-Katalyse mit photosynthetischen Biohybriden. 2022, 28, 546-548	0
68	A Chloroplast-Localised Fluorescent Protein Enhances the Photosynthetic Action Spectrum in Green Algae. 2022, 10, 1770	0
67	Rational design of photosynthetic reaction center protein maquettes. 9,	1
66	Molecular-Modified Photocathodes for Applications in Artificial Photosynthesis and Solar-to-Fuel Technologies.	3
65	Deciphering modes of long-range energy transfer in perovskite crystals using confocal excitation and wide-field fluorescence spectral imaging. 2022, 10, 044013	0
64	Thermochemical CO ₂ Splitting Enhanced by In Situ Oxygen Separation through CeO ₂ and CaTiO ₃ Membranes. 2022, 36, 12226-12235	0
63	Riboflavin synthesis from gaseous nitrogen and carbon dioxide by a hybrid inorganic-biological system. 2022, 119,	1
62	Identification of sugars as root exudates of the macrophyte species <i>Juncus effusus</i> and <i>Philodendron cordatum</i> in constructed wetland-microbial fuel cells during bioelectricity production. 1-15	0
61	Low-Loss, High-Transparency Luminescent Solar Concentrators with a Bioinspired Self-Cleaning Surface. 2022, 13, 9177-9185	0
60	Practical Semiconductor Physics Perspective of Materials PhotoElectroChemistry. 2022, 101160	0
59	Recent progress in atomistic modeling of light-harvesting complexes: a mini review.	2
58	Plant microbial fuel cells from the perspective of photovoltaics: Efficiency, power, and applications. 2022, 169, 112953	0
57	Synthesizing the biochemical and semiconductor worlds: the future of nucleic acid nanotechnology. 2022, 14, 15586-15595	0
56	Fullerene-Perylenediimide (C ₆₀ -PDI) Based Systems: An Overview and Synthesis of a Versatile Platform for Their Anchor Engineering. 2022, 27, 6522	2
55	Engineering a Rhodopsin-Based Photo-Electrosynthetic System in Bacteria for CO ₂ Fixation.	1

- 54 Towards renewable green energy produced by prickly pear living plant. **2022**, 15, 253-265 ○
- 53 Solar fuel processing: Comparative mini-review on research, technology development, and scaling. **2022**, 246, 294-300 ○
- 52 Natural leaf-inspired solar water splitting system. **2023**, 322, 122086 ○
- 51 Improving Plant Photosynthesis through Light-Harvesting Upconversion Nanoparticles. ○
- 50 Recent Advances In Microbe-Photocatalyst Hybrid Systems for Production of Bulk Chemicals: A Review. ○
- 49 Maximizing light-driven CO₂ and N₂ fixation efficiency in quantum dotBacteria hybrids. ○
- 48 Self-assembled supramolecular materials for photocatalytic H₂ production and CO₂ reduction. ○
- 47 Energy transfer in supramolecular calix[4]arenePerylene bisimide dye light harvesting building blocks: Resolving loss processes with simultaneous target analysis. **2022**, 12, 100154 ○
- 46 Plant microbial fuel cells as an innovative, versatile agro-technology for green energy generation combined with wastewater treatment and food production. **2022**, 167, 106629 ○
- 45 Spectral-splitting concentrator agrivoltaics for higher hybrid solar energy conversion efficiency. **2023**, 276, 116567 ○
- 44 Molecule-electron-proton transfer in enzyme-photo-coupled catalytic system. **2023**, 44, 96-110 ○
- 43 Shikimic acid biosynthesis in microorganisms: Current status and future direction. **2023**, 62, 108073 2
- 42 Development of bio-photo anodes using Ulvophyceae macroalgae. ○
- 41 Carbon dioxide capture and its electrochemical reduction study in deep eutectic solvent (DES) via experimental and molecular simulation approaches. **2023**, 68, 102349 ○
- 40 ??????????????????. **2022**, ○
- 39 Emerging Trends in Nanomaterials for Photosynthetic Biohybrid Systems. 95-115 2
- 38 Photoelectrochemical energy conversion using hybrid photoelectrodes. **2022**, 11, 251-258 ○
- 37 Photosynthetic Polymer DotsBacteria Biohybrid System Based on Transmembrane Electron Transport for Fixing CO₂ into Poly-3-hydroxybutyrate. ○

36	Hybrid chem-bio production from electricity and CO ₂ via two-carbon mediators. 2022 , 8, 3162-3165	0
35	Decoupling light absorption and carrier transport via heterogeneous doping in Ta ₃ N ₅ thin film photoanode. 2022 , 13,	2
34	Emerging Trends of Nanotechnology and Genetic Engineering in Cyanobacteria to Optimize Production for Future Applications. 2022 , 12, 2013	1
33	Engineering the Charge Density on an In ₂ S ₃ /Porous Organic Polymer Hybrid Photocatalyst for CO ₂ -to-Ethylene Conversion Reaction.	2
32	Advancing bio-based materials for sustainable solutions to food packaging.	0
31	Feasibility Study for Project of Agrophotovoltaic System Based on the Existing Solar Power Plant. 2022 , 8, 73-80	0
30	Self-assembled supramolecular artificial light-harvesting nanosystems: construction, modulation, and applications.	1
29	Closing the green gap of photosystem I with synthetic fluorophores for enhanced photocurrent generation in photobiocathodes.	0
28	Boost Nature-Positive Production. 2023 , 319-340	0
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26	Protein assembly: Controllable design strategies and applications in biology.	0
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24	Water-soluble conjugated polymers for bioelectronic systems.	0
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22	Wissenschaftliche Grundlagen zum Strategiediskurs für einen nachhaltigen Pflanzenbau. 2022 , 73, 153-192	0
21	Detailed in situ leaf energy budget permits the assessment of leaf aerodynamic resistance as a key to enhance non-evaporative cooling under drought.	0
20	Investigating limitations of biohybrid photoelectrode using synchronized spectroelectrochemistry. 2023 , 7, 457-459	0
19	Recent progress in the synthesis of advanced biofuel and bioproducts. 2023 , 80, 102913	0

- 18 Comparison of physicochemical properties of choline chloride-based deep eutectic solvents for CO₂ capture: Progress and outlook. **2023**, 376, 121436 ○
- 17 Piezoelectric materials: Advanced applications in electro-chemical processes. **2023**, 9, 4306-4324 ○
- 16 Machine Learning Exciton Hamiltonians in Light-Harvesting Complexes. **2023**, 19, 965-977 ○
- 15 Algal Biohydrogen Production: Opportunities and Challenges. **2023**, 77-103 ○
- 14 Solar energy conversion by photosystem II: principles and structures. ○
- 13 Reorganization energy of electron transfer. **2023**, 25, 7589-7610 ○
- 12 Bioexcitons by Design: How Do We Get There?. **2023**, 127, 1872-1879 ○
- 11 Balancing photosynthesis, O₂ consumption, and H₂ recycling for sustained H₂ photoproduction in pulse-illuminated algal cultures. **2023**, 7, 1818-1828 ○
- 10 Nanobionics: A Sustainable Agricultural Approach towards Understanding Plant Response to Heavy Metals, Drought, and Salt Stress. **2023**, 13, 974 ○
- 9 Progress and Perspectives for Solar-Driven Water Electrolysis to Produce Green Hydrogen. 2300254 ○
- 8 A Mini-Review of Current Activities and Future Trends in Agrivoltaics. **2023**, 16, 3009 ○
- 7 Recent Advancements in Photoelectrochemical Water Splitting for Hydrogen Production. **2023**, 6, ○
- 6 EPDM rubber-based membranes for electrochemical water splitting and carbon dioxide reduction reactions. ○
- 5 Microstructure Engineered Photon-Managing Films for Solar Energy to Biomass Conversion. ○
- 4 Plant nanobionics: Fortifying food security via engineered plant productivity. **2023**, 115934 ○
- 3 Challenges and perspectives for solar fuel production from water/carbon dioxide with thermochemical cycles. **2023**, 2, ○
- 2 Radiation Use Efficiency (RUE) as Target for Improving Yield Potential: Current Status and Future Prospect. **2023**, 177-195 ○
- 1 Symmetry in Regression Analysis: Perpendicular Offsets in the Case of a Photovoltaic Cell. **2023**, 15, 948 ○

