

# Paul G O'brien

## List of Publications by Year in descending order

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Version: 2024-02-01

45  
papers

2,418  
citations

218677

26  
h-index

243625

44  
g-index

47  
all docs

47  
docs citations

47  
times ranked

3556  
citing authors

#	ARTICLE	IF	CITATIONS
1	Synthesis of Black TiO <sub>x</sub> Nanoparticles by Mg Reduction of TiO <sub>2</sub> Nanocrystals and their Application for Solar Water Evaporation. <i>Advanced Energy Materials</i> , 2017, 7, 1601811.	19.5	326
2	The Rational Design of a Single-Component Photocatalyst for Gas-Phase CO <sub>2</sub> Reduction Using Both UV and Visible Light. <i>Advanced Science</i> , 2014, 1, 1400013.	11.2	182
3	Photomethanation of Gaseous CO <sub>2</sub> over Ru/Silicon Nanowire Catalysts with Visible and Near-Infrared Photons. <i>Advanced Science</i> , 2014, 1, 1400001.	11.2	150
4	Large-Scale Synthesis of Ultrathin Bi <sub>2</sub> S <sub>3</sub> Necklace Nanowires. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 3814-3817.	13.8	138
5	Visible and Near-Infrared Photothermal Catalyzed Hydrogenation of Gaseous CO <sub>2</sub> over Nanostructured Pd@Nb <sub>2</sub> O <sub>5</sub> . <i>Advanced Science</i> , 2016, 3, 1600189.	11.2	133
6	Spatial Separation of Charge Carriers in In <sub>2</sub> O <sub>3</sub> (OH) Nanocrystal Superstructures for Enhanced Gas-Phase Photocatalytic Activity. <i>ACS Nano</i> , 2016, 10, 5578-5586.	14.6	118
7	Nanostructured Indium Oxide Coated Silicon Nanowire Arrays: A Hybrid Photothermal/Photochemical Approach to Solar Fuels. <i>ACS Nano</i> , 2016, 10, 9017-9025.	14.6	109
8	Photothermal Catalyst Engineering: Hydrogenation of Gaseous CO <sub>2</sub> with High Activity and Tailored Selectivity. <i>Advanced Science</i> , 2017, 4, 1700252.	11.2	97
9	Heterogeneous reduction of carbon dioxide by hydride-terminated silicon nanocrystals. <i>Nature Communications</i> , 2016, 7, 12553.	12.8	93
10	Silicon Photovoltaics Using Conducting Photonic Crystal Back-Reflectors. <i>Advanced Materials</i> , 2008, 20, 1577-1582.	21.0	84
11	Enhanced photothermal reduction of gaseous CO <sub>2</sub> over silicon photonic crystal supported ruthenium at ambient temperature. <i>Energy and Environmental Science</i> , 2018, 11, 3443-3451.	30.8	83
12	Cross-Linking Bi <sub>2</sub> S <sub>3</sub> Ultrathin Nanowires: A Platform for Nanostructure Formation and Biomolecule Detection. <i>Nano Letters</i> , 2009, 9, 1482-1486.	9.1	75
13	Enhanced Hematite Water Electrolysis Using a 3D Antimony-Doped Tin Oxide Electrode. <i>ACS Nano</i> , 2013, 7, 4261-4274.	14.6	72
14	Enhanced Photoconductivity in Thin-Film Semiconductors Optically Coupled to Photonic Crystals. <i>Advanced Materials</i> , 2007, 19, 4177-4182.	21.0	65
15	Organic Light-Emitting Diode Microcavities from Transparent Conducting Metal Oxide Photonic Crystals. <i>Nano Letters</i> , 2011, 11, 1457-1462.	9.1	58
16	Highly Efficient Ambient Temperature CO <sub>2</sub> Photomethanation Catalyzed by Nanostructured RuO <sub>2</sub> on Silicon Photonic Crystal Support. <i>Advanced Energy Materials</i> , 2018, 8, 1702277.	19.5	58
17	See-Through Dye-Sensitized Solar Cells: Photonic Reflectors for Tandem and Building Integrated Photovoltaics. <i>Advanced Materials</i> , 2013, 25, 5734-5741.	21.0	51
18	Activation of Ultrathin Films of Hematite for Photoelectrochemical Water Splitting via H <sub>2</sub> Treatment. <i>ChemSusChem</i> , 2015, 8, 1557-1567.	6.8	51

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19	Selectively Transparent and Conducting Photonic Crystals. <i>Advanced Materials</i> , 2010, 22, 611-616.	21.0	47
20	Tailoring the Electrical Properties of Inverse Silicon Opals – A Step Towards Optically Amplified Silicon Solar Cells. <i>Advanced Materials</i> , 2009, 21, 559-563.	21.0	40
21	Photocatalytic Properties of All Four Polymorphs of Nanostructured Iron Oxyhydroxides. <i>ChemNanoMat</i> , 2016, 2, 1047-1054.	2.8	38
22	Morphology-controlled In <sub>2</sub> O <sub>3</sub> nanostructures enhance the performance of photoelectrochemical water oxidation. <i>Nanoscale</i> , 2015, 7, 3683-3693.	5.6	37
23	Solar-Driven Interfacial Water Evaporation Using Open-Porous PDMS Embedded with Carbon Nanoparticles. <i>ACS Applied Energy Materials</i> , 2020, 3, 3378-3386.	5.1	37
24	Photonic crystal intermediate reflectors for micromorph solar cells: a comparative study. <i>Optics Express</i> , 2010, 18, 4478.	3.4	34
25	Radiative cooling for buildings: A review of techno-enviro-economics and life-cycle assessment methods. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 162, 112415.	16.4	31
26	Selectively transparent and conducting photonic crystal solar spectrum splitters made of alternating sputtered indium-tin oxide and spin-coated silica nanoparticle layers for enhanced photovoltaics. <i>Solar Energy Materials and Solar Cells</i> , 2012, 102, 173-183.	6.2	30
27	Flash Nano-Welding: Investigation and Control of the Photothermal Response of Ultrathin Bismuth Sulfide Nanowire Films. <i>Advanced Materials</i> , 2010, 22, 4395-4400.	21.0	24
28	See-through amorphous silicon solar cells with selectively transparent and conducting photonic crystal back reflectors for building integrated photovoltaics. <i>Applied Physics Letters</i> , 2013, 103, 221109.	3.3	24
29	Selectively transparent and conducting photonic crystal rear-contacts for thin-film silicon-based building integrated photovoltaics. <i>Optics Express</i> , 2011, 19, 17040.	3.4	23
30	Enhancing photovoltaics with broadband high-transparency glass using porosity-tuned multilayer silica nanoparticle anti-reflective coatings. <i>RSC Advances</i> , 2014, 4, 31188-31195.	3.6	15
31	Heat Generated Using Luminescent Solar Concentrators for Building Energy Applications. <i>Energies</i> , 2020, 13, 5574.	3.1	13
32	Numerical evaluation of one-dimensional transparent photonic crystal heat mirror coatings for parabolic dish concentrator receivers. <i>Renewable Energy</i> , 2021, 171, 1202-1212.	8.9	12
33	Growth of Metal Nanocrystals on Nanostructured Metal Oxides – Dramatic Effect of Antimony Doping. <i>Chemistry of Materials</i> , 2011, 23, 1353-1355.	6.7	11
34	From Bare Metal Powders to Colloidally Stable TCO Dispersions and Transparent Nanoporous Conducting Metal Oxide Thin Films. <i>Small</i> , 2012, 8, 3806-3809.	10.0	11
35	Transparent Photonic Crystal Heat Mirrors for Solar Thermal Applications. <i>Energies</i> , 2020, 13, 1464.	3.1	11
36	Evaluation of a ZrO <sub>2</sub> /ZrO <sub>2</sub> -aerogel one-dimensional photonic crystal as an optical filter for thermophotovoltaic applications. <i>Thermal Science and Engineering Progress</i> , 2021, 25, 100968.	2.7	11

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37	Solar Fuels: Highly Efficient Ambient Temperature CO <sub>2</sub> Photomethanation Catalyzed by Nanostructured RuO <sub>2</sub> on Silicon Photonic Crystal Support (Adv. Energy Mater. 9/2018). Advanced Energy Materials, 2018, 8, 1870041.	19.5	7
38	Nanoporous transparent and conducting films and photonic crystals. Optical Materials Express, 2013, 3, 2055.	3.0	3
39	Elliptic Array Luminescent Solar Concentrators for Combined Power Generation and Microalgae Growth. Energies, 2021, 14, 5229.	3.1	3
40	Ellipsoidal Optical Cavities for Enhanced Thermophotovoltaics. IEEE Journal of Photovoltaics, 2022, 12, 353-363.	2.5	3
41	Photothermal Catalysis: Photothermal Catalyst Engineering: Hydrogenation of Gaseous CO <sub>2</sub> with High Activity and Tailored Selectivity (Adv. Sci. 10/2017). Advanced Science, 2017, 4, .	11.2	2
42	Elliptic paraboloid-based solar spectrum splitters for self-powered photobioreactors. Renewable Energy, 2021, 163, 1773-1785.	8.9	2
43	Carbon Dioxide Reduction: Visible and Near-Infrared Photothermal Catalyzed Hydrogenation of Gaseous CO <sub>2</sub> over Nanostructured Pd@Nb <sub>2</sub> O <sub>5</sub> (Adv. Sci. 10/2016). Advanced Science, 2016, 3, .	11.2	1
44	Analysis Of Thermal Losses In Air-Water Interfacial Solar Heating Systems. , 2018, , .		1
45	Optical characterization of selectively transparent and conducting photonic crystals for use in thin crystalline silicon photovoltaics. , 2013, , .		0