

# Roberto Comparelli

## List of Publications by Year in descending order

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117  
papers

4,104  
citations

109321

35  
h-index

128289

60  
g-index

121  
all docs

121  
docs citations

121  
times ranked

6331  
citing authors

#	ARTICLE	IF	CITATIONS
1	Photocatalytic Synthesis of Silver Nanoparticles Stabilized by TiO <sub>2</sub> Nanorods: A Semiconductor/Metal Nanocomposite in Homogeneous Nonpolar Solution. <i>Journal of the American Chemical Society</i> , 2004, 126, 3868-3879.	13.7	304
2	UV-induced photocatalytic degradation of azo dyes by organic-capped ZnO nanocrystals immobilized onto substrates. <i>Applied Catalysis B: Environmental</i> , 2005, 60, 1-11.	20.2	262
3	Colloidal oxide nanoparticles for the photocatalytic degradation of organic dye. <i>Materials Science and Engineering C</i> , 2003, 23, 285-289.	7.3	218
4	Photocatalytic degradation of azo dyes by organic-capped anatase TiO nanocrystals immobilized onto substrates. <i>Applied Catalysis B: Environmental</i> , 2005, 55, 81-91.	20.2	190
5	Role of Metal Nanoparticles in TiO <sub>2</sub> /Ag Nanocomposite-Based Microheterogeneous Photocatalysis. <i>Journal of Physical Chemistry B</i> , 2004, 108, 9623-9630.	2.6	188
6	Nanocomposite materials for photocatalytic degradation of pollutants. <i>Catalysis Today</i> , 2017, 281, 85-100.	4.4	161
7	Optical properties of hybrid composites based on highly luminescent CdS nanocrystals in polymer. <i>Nanotechnology</i> , 2004, 15, S240-S244.	2.6	150
8	Photocatalytic degradation of methyl red by TiO <sub>2</sub> : Comparison of the efficiency of immobilized nanoparticles versus conventional suspended catalyst. <i>Journal of Hazardous Materials</i> , 2007, 142, 130-137.	12.4	141
9	UV and solar-based photocatalytic degradation of organic pollutants by nano-sized TiO <sub>2</sub> grown on carbon nanotubes. <i>Catalysis Today</i> , 2015, 240, 114-124.	4.4	122
10	Visible-Light-Active TiO <sub>2</sub> -Based Hybrid Nanocatalysts for Environmental Applications. <i>Catalysts</i> , 2017, 7, 100.	3.5	93
11	Photochemical Synthesis of Water-Soluble Gold Nanorods: The Role of Silver in Assisting Anisotropic Growth. <i>Chemistry of Materials</i> , 2009, 21, 4192-4202.	6.7	85
12	Encapsulation of Curcumin-Loaded Liposomes for Colonic Drug Delivery in a pH-Responsive Polymer Cluster Using a pH-Driven and Organic Solvent-Free Process. <i>Molecules</i> , 2018, 23, 739.	3.8	78
13	Gram-scale synthesis of UV-vis light active plasmonic photocatalytic nanocomposite based on TiO <sub>2</sub> /Au nanorods for degradation of pollutants in water. <i>Applied Catalysis B: Environmental</i> , 2019, 243, 604-613.	20.2	76
14	A Cast-Mold Approach to Iron Oxide and Pt/Iron Oxide Nanocontainers and Nanoparticles with a Reactive Concave Surface. <i>Journal of the American Chemical Society</i> , 2011, 133, 2205-2217.	13.7	71
15	Towards highly stable aqueous dispersions of multi-walled carbon nanotubes: the effect of oxygen plasma functionalization. <i>Journal of Colloid and Interface Science</i> , 2017, 491, 255-264.	9.4	66
16	Next-generation thermo-plasmonic technologies and plasmonic nanoparticles in optoelectronics. <i>Progress in Quantum Electronics</i> , 2015, 41, 23-70.	7.0	65
17	Photocatalytic activity of organic-capped anatase TiO <sub>2</sub> nanocrystals in homogeneous organic solutions. <i>Materials Science and Engineering C</i> , 2003, 23, 707-713.	7.3	60
18	Ion-Directed Assembly of Gold Nanorods: A Strategy for Mercury Detection. <i>ACS Applied Materials &amp; Interfaces</i> , 2013, 5, 1084-1092.	8.0	58

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19	Colloidal Inorganic Nanocrystal Based Nanocomposites: Functional Materials for Micro and Nanofabrication. <i>Materials</i> , 2010, 3, 1316-1352.	2.9	47
20	Nanocrystalline TiO <sub>2</sub> based films onto fibers for photocatalytic degradation of organic dye in aqueous solution. <i>Applied Catalysis B: Environmental</i> , 2012, 121-122, 190-197.	20.2	47
21	Improved optical properties of CdS quantum dots by ligand exchange. <i>Materials Science and Engineering C</i> , 2003, 23, 1083-1086.	7.3	46
22	Photo-thermal effects in gold nanoparticles dispersed in thermotropic nematic liquid crystals. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 20281-20287.	2.8	46
23	Photocatalytic TiO <sub>2</sub> -based coatings for environmental applications. <i>Catalysis Today</i> , 2021, 380, 62-83.	4.4	46
24	UV-Curable Nanocomposite Based on Methacrylic-Siloxane Resin and Surface-Modified TiO <sub>2</sub> Nanocrystals. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 15494-15505.	8.0	45
25	One pot environmental friendly synthesis of gold nanoparticles using Punica Granatum Juice: A novel antioxidant agent for future dermatological and cosmetic applications. <i>Journal of Colloid and Interface Science</i> , 2018, 521, 50-61.	9.4	45
26	Photocatalytic TiO <sub>2</sub> -Based Nanostructured Materials for Microbial Inactivation. <i>Catalysts</i> , 2020, 10, 1382.	3.5	44
27	Photocatalytic degradation of methyl-red by immobilised nanoparticles of TiO <sub>2</sub> and ZnO. <i>Water Science and Technology</i> , 2004, 49, 183-188.	2.5	43
28	High quality CdS nanocrystals: surface effects. <i>Synthetic Metals</i> , 2003, 139, 597-600.	3.9	42
29	Preparation of drug-loaded small unilamellar liposomes and evaluation of their potential for the treatment of chronic respiratory diseases. <i>International Journal of Pharmaceutics</i> , 2018, 545, 378-388.	5.2	42
30	Scalable Synthesis of Mesoporous TiO <sub>2</sub> for Environmental Photocatalytic Applications. <i>Materials</i> , 2019, 12, 1853.	2.9	42
31	Photocatalytic Activity of Nanocomposite Catalyst Films Based on Nanocrystalline Metal/Semiconductors. <i>Journal of Physical Chemistry C</i> , 2011, 115, 12033-12040.	3.1	39
32	Photodegradation of nalidixic acid assisted by TiO <sub>2</sub> nanorods/Ag nanoparticles based catalyst. <i>Chemosphere</i> , 2013, 91, 941-947.	8.2	37
33	Eudragit S100 Entrapped Liposome for Curcumin Delivery: Anti-Oxidative Effect in Caco-2 Cells. <i>Coatings</i> , 2020, 10, 114.	2.6	37
34	SERS Properties of Gold Nanorods at Resonance with Molecular, Transverse, and Longitudinal Plasmon Excitations. <i>Plasmonics</i> , 2014, 9, 581-593.	3.4	36
35	Emerging methods for fabricating functional structures by patterning and assembling engineered nanocrystals. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 11197.	2.8	35
36	Nano-Localized Heating Source for Photonics and Plasmonics. <i>Advanced Optical Materials</i> , 2013, 1, 899-904.	7.3	35

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37	Î±-Cyclodextrin Functionalized CdS Nanocrystals for Fabrication of 2/3 D Assemblies. Journal of Physical Chemistry B, 2006, 110, 17388-17399.	2.6	31
38	Hybrid Assemblies of Fluorescent Nanocrystals and Membrane Proteins in Liposomes. Langmuir, 2014, 30, 1599-1608.	3.5	30
39	Photoactive Hybrid Material Based on Pyrene Functionalized PbS Nanocrystals Decorating CVD Monolayer Graphene. ACS Applied Materials & Interfaces, 2015, 7, 4151-4159.	8.0	29
40	Ascorbic acid-sensitized Au nanorods-functionalized nanostructured TiO <sub>2</sub> transparent electrodes for photoelectrochemical genosensing. Electrochimica Acta, 2018, 276, 389-398.	5.2	29
41	Direct growth of shape controlled TiO <sub>2</sub> nanocrystals onto SWCNTs for highly active photocatalytic materials in the visible. Applied Catalysis B: Environmental, 2015, 178, 91-99.	20.2	28
42	Thermo-Plasmonic Killing of Escherichia coli TG1 Bacteria. Materials, 2019, 12, 1530.	2.9	27
43	In vitro characterization of 6-Coumarin loaded solid lipid nanoparticles and their uptake by immunocompetent fish cells. Colloids and Surfaces B: Biointerfaces, 2015, 127, 79-88.	5.0	26
44	A Multifrequency EPR Study on Organic-Capped Anatase TiO <sub>2</sub> Nanocrystals. Journal of Physical Chemistry C, 2009, 113, 6221-6226.	3.1	25
45	Uniform TiO <sub>2</sub> /In <sub>2</sub> O <sub>3</sub> surface films effective in bacterial inactivation under visible light. Journal of Photochemistry and Photobiology A: Chemistry, 2014, 279, 1-7.	3.9	24
46	Biofunctionalization of Anisotropic Nanocrystalline Semiconductorâ€“Magnetic Heterostructures. Langmuir, 2011, 27, 6962-6970.	3.5	22
47	High Surface Area Mesoporous Silica Nanoparticles with Tunable Size in the Sub-Micrometer Regime: Insights on the Size and Porosity Control Mechanisms. Molecules, 2021, 26, 4247.	3.8	22
48	Luminescent nanocrystals in phospholipid micelles for bioconjugation: An optical and structural investigation. Journal of Colloid and Interface Science, 2008, 325, 558-566.	9.4	21
49	The fate of silver ions in the photochemical synthesis of gold nanorods: an Extended X-ray Absorption Fine Structure Analysis. Dalton Transactions, 2009, , 10367.	3.3	21
50	TiO <sub>2</sub> Nanocrystal Based Coatings for the Protection of Architectural Stone: The Effect of Solvents in the Spray-Coating Application for a Self-Cleaning Surfaces. Coatings, 2018, 8, 356.	2.6	21
51	Electroactive Layer-by-Layer Plasmonic Architectures Based on Au Nanorods. Langmuir, 2014, 30, 2608-2618.	3.5	19
52	Integrin-targeting with peptide-bioconjugated semiconductor-magnetic nanocrystalline heterostructures. Nano Research, 2016, 9, 644-662.	10.4	19
53	A designed UVâ€“vis light curable coating nanocomposite based on colloidal TiO <sub>2</sub> NRs in a hybrid resin for stone protection. Progress in Organic Coatings, 2018, 122, 290-301.	3.9	19
54	Enhanced photoactivity and conductivity in transparent TiO <sub>2</sub> nanocrystals/graphene hybrid anodes. Journal of Materials Chemistry A, 2017, 5, 9307-9315.	10.3	18

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55	Interaction between the photosynthetic anoxygenic microorganism <i>Rhodobacter sphaeroides</i> and soluble gold compounds. From toxicity to gold nanoparticle synthesis. <i>Colloids and Surfaces B: Biointerfaces</i> , 2018, 172, 362-371.	5.0	18
56	Excitation-Dependent Ultrafast Carrier Dynamics of Colloidal TiO <sub>2</sub> Nanorods in Organic Solvent. <i>Journal of Physical Chemistry C</i> , 2014, 118, 25215-25222.	3.1	17
57	Lipid-based systems loaded with PbS nanocrystals: near infrared emitting trackable nanovectors. <i>Journal of Materials Chemistry B</i> , 2017, 5, 1471-1481.	5.8	17
58	Colloidal Nanocrystalline Semiconductor Materials as Photocatalysts for Environmental Protection of Architectural Stone. <i>Crystals</i> , 2017, 7, 30.	2.2	17
59	Determination of optical parameters of colloidal TiO <sub>2</sub> nanocrystals-based thin films by using surface plasmon resonance measurements for sensing applications. <i>Sensors and Actuators B: Chemical</i> , 2006, 115, 365-373.	7.8	16
60	Multifunctional TiO <sub>2</sub> /Fe <sub>x</sub> O <sub>y</sub> /Ag based nanocrystalline heterostructures for photocatalytic degradation of a recalcitrant pollutant. <i>Catalysis Today</i> , 2017, 284, 100-106.	4.4	16
61	Coupling effects in QD dimers at sub-nanometer interparticle distance. <i>Nano Research</i> , 2020, 13, 1071-1080.	10.4	16
62	Cyclodextrin mediated phase transfer in water of organic capped CdS nanocrystals. <i>Synthetic Metals</i> , 2005, 148, 43-46.	3.9	15
63	Interactions between surfactant capped CdS nanocrystals and organic solvent. <i>Journal of Thermal Analysis and Calorimetry</i> , 2008, 92, 271-277.	3.6	15
64	Lipid/detergent mixed micelles as a tool for transferring antioxidant power from hydrophobic natural extracts into bio-deliverable liposome carriers: the case of lycopene rich oleoresins. <i>RSC Advances</i> , 2015, 5, 3081-3093.	3.6	15
65	Low Temperature Synthesis of Photocatalytic Mesoporous TiO <sub>2</sub> Nanomaterials. <i>Catalysts</i> , 2020, 10, 893.	3.5	15
66	Photoelectrodes with Polydopamine Thin Films Incorporating a Bacterial Photoenzyme. <i>Advanced Electronic Materials</i> , 2020, 6, 2000140.	5.1	15
67	TiO <sub>2</sub> -based nanomaterials assisted photocatalytic treatment for virus inactivation: perspectives and applications. <i>Current Opinion in Chemical Engineering</i> , 2021, 34, 100716.	7.8	15
68	Thermoplasmonic Activated Reverse-Mode Liquid Crystal Gratings. <i>ACS Applied Nano Materials</i> , 2019, 2, 3315-3322.	5.0	14
69	Photocurrent generation in a CdS nanocrystals/poly[2-methoxy-5-(2-ethyl-hexyloxy)phenylene vinylene] electrochemical cell. <i>Thin Solid Films</i> , 2008, 516, 5010-5015.	1.8	13
70	Tuning light emission of PbS nanocrystals from infrared to visible range by cation exchange. <i>Science and Technology of Advanced Materials</i> , 2015, 16, 055007.	6.1	13
71	Assembly of a photosynthetic reaction center with ABA tri-block polymersomes: highlights on protein localization. <i>Photochemical and Photobiological Sciences</i> , 2015, 14, 1844-1852.	2.9	13
72	Preparation and Characterization of Soybean Oil-Based Polyurethanes for Digital Doming Applications. <i>Materials</i> , 2017, 10, 848.	2.9	13

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73	Polydopamine/Ethylenediamine Nanoparticles Embedding a Photosynthetic Bacterial Reaction Center for Efficient Photocurrent Generation. <i>Advanced Sustainable Systems</i> , 2021, 5, 2000303.	5.3	13
74	Assembly of Gold Nanorods for Highly Sensitive Detection of Mercury Ions. <i>IEEE Sensors Journal</i> , 2013, 13, 2834-2841.	4.7	12
75	Segmented poly(styrene-co-vinylpyridine) as multivalent host for CdSe nanocrystal based nanocomposites. <i>European Polymer Journal</i> , 2014, 60, 222-234.	5.4	12
76	Photocatalytic Activity of TiO <sub>2</sub> /AuNRs@SiO <sub>2</sub> Nanocomposites Applied to Building Materials. <i>Coatings</i> , 2018, 8, 296.	2.6	12
77	Transforming anatase TiO <sub>2</sub> nanorods into ultrafine nanoparticles for advanced electrochemical performance. <i>Journal of Power Sources</i> , 2015, 294, 406-413.	7.8	11
78	Plasmonic Thermometer Based on Thermotropic Liquid Crystals. <i>Molecular Crystals and Liquid Crystals</i> , 2015, 614, 93-99.	0.9	11
79	TiO <sub>2</sub> @PEI-Grafted-MWCNTs Hybrids Nanocomposites Catalysts for CO <sub>2</sub> Photoreduction. <i>Materials</i> , 2018, 11, 307.	2.9	11
80	Surface Engineering of Gold Nanorods for Cytochrome <i>c</i> Bioconjugation: An Effective Strategy To Preserve the Protein Structure. <i>ACS Omega</i> , 2018, 3, 4959-4967.	3.5	11
81	Polyelectrolyte Multilayers As a Platform for Luminescent Nanocrystal Patterned Assemblies. <i>Langmuir</i> , 2012, 28, 5964-5974.	3.5	10
82	Luminescent CdSe@ZnS nanocrystals embedded in liposomes: a cytotoxicity study in HeLa cells. <i>Toxicology Research</i> , 2017, 6, 947-957.	2.1	9
83	Human elastin polypeptides improve the biomechanical properties of three-dimensional matrices through the regulation of elastogenesis. <i>Journal of Biomedical Materials Research - Part A</i> , 2015, 103, 1218-1230.	4.0	8
84	Nanoparticle enhanced laser ablation inductively coupled plasma mass spectrometry. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2020, 163, 105731.	2.9	8
85	Gold-Speckled SPION@SiO <sub>2</sub> Nanoparticles Decorated with Thiocarbohydrates for ASGPR1 Targeting: Towards HCC Dual Mode Imaging Potential Applications. <i>Chemistry - A European Journal</i> , 2020, 26, 11048-11059.	3.3	8
86	Peripheral thioester functionalization induces <i>J</i> -aggregation in bithiophene-DPP films and nanoparticles. <i>RSC Advances</i> , 2021, 11, 11536-11540.	3.6	8
87	PbS nanocrystals decorated Reduced Graphene Oxide for NIR responsive capacitive cathodes. <i>Carbon</i> , 2021, 182, 57-69.	10.3	8
88	Opto-Electronic Characterization of Photocatalysts Based on p,n-Junction Ternary and Quaternary Mixed Oxides Semiconductors (Cu <sub>2</sub> O-In <sub>2</sub> O <sub>3</sub> and Cu <sub>2</sub> O-In <sub>2</sub> O <sub>3</sub> -TiO <sub>2</sub> ). <i>Catalysts</i> , 2022, 12, 153.	3.5	8
89	Selective Aerobic Oxidation of Furfural into Furoic Acid over a Highly Recyclable MnO <sub>2</sub> @CeO <sub>2</sub> Core-Shell Oxide: The Role of the Morphology of the Catalyst. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 8615-8623.	6.7	8
90	Phase Transfer of CdS Nanocrystals Mediated by Heptamine $\beta$ -Cyclodextrin. <i>Langmuir</i> , 2012, 28, 8711-8720.	3.5	7

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91	Plasmonic photoheating of gold nanorods in thermo-responsive chiral liquid crystals. Journal of Optics (United Kingdom), 2016, 18, 125005.	2.2	7
92	Photo-thermal effects in gold nanorods/DNA complexes. Micro and Nano Systems Letters, 2015, 3, .	3.7	6
93	Hybrid nanocomposites based on CdS and CdSe colloidal nanocrystals in organic polymers. , 2005, , .		5
94	Chemically Directed Assembling of Functionalized Luminescent Nanocrystals onto Plasma Modified Substrates Towards Sensing and Optoelectronic Applications. Plasma Processes and Polymers, 2009, 6, S870.	3.0	5
95	Liquid Crystals: Nano-Localized Heating Source for Photonics and Plasmonics (Advanced Optical) Tj ETQq1 1 0.784314 rgBI /Overlock	7.3	5
96	Templating gold nanorods with liquid crystalline DNA. Journal of Optics (United Kingdom), 2015, 17, 025001.	2.2	5
97	Applications of nanomaterials in modern medicine. Rendiconti Lincei, 2015, 26, 231-237.	2.2	5
98	Functionalized luminescent nanocrystals on patterned surfaces obtained by radio frequency glow discharges. Nanotechnology, 2013, 24, 145302.	2.6	4
99	TiO <sub>2</sub> Nanocrystals Decorated CVD Graphene Based Hybrid for UV-Light Active Photoanodes. Procedia Engineering, 2016, 168, 396-402.	1.2	4
100	Electrophoretic deposition of colloidal TiO <sub>2</sub> nanorods towards nano-porous thin-films. Materials Letters, 2016, 174, 226-229.	2.6	4
101	Nanomaterials in Photo (Electro) Catalysis. Catalysts, 2021, 11, 149.	3.5	4
102	Recombination Dynamics of Colloidal Nanocrystals in Functionalized-Poly-Methylmethacrylate Nanocomposites. Nanoscience and Nanotechnology Letters, 2015, 7, 67-73.	0.4	4
103	Patterned assembly of luminescent nanocrystals: role of the molecular chemistry at the interface. Journal of Nanoparticle Research, 2014, 16, 1.	1.9	3
104	Nanostructured Photoelectrochemical Biosensing Platform for Cancer Biomarker Detection. Procedia Technology, 2017, 27, 144-145.	1.1	3
105	Water phase transfer of oleic capped semiconductor nanocrystals mediated by $\beta$ -cyclodextrins. , 2005, , .		2
106	Photo-Induced Heating in Plasmonic Nanoparticles Trapped in Thermo-Sensitive Liquid Crystals. Journal of Nanoscience and Nanotechnology, 2018, 18, 6708-6718.	0.9	2
107	Photocatalytic Application of Ag/TiO <sub>2</sub> Hybrid Nanoparticles. , 2019, , 373-394.		2
108	PbS Quantum Dots Decorating TiO <sub>2</sub> Nanocrystals: Synthesis, Topology, and Optical Properties of the Colloidal Hybrid Architecture. Molecules, 2020, 25, 2939.	3.8	2

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109	Surface Functionalized Luminescent Nanocrystals Electrostatically Assembled onto a Patterned Substrate. <i>Current Nanoscience</i> , 2016, 12, 386-395.	1.2	2
110	Colloidal chemistry routes for fabrication of nanoparticle-based metamaterials. <i>Proceedings of SPIE</i> , 2010, , .	0.8	1
111	7. Characterization of inorganic nanostructured materials by electron microscopy. , 0, , .		1
112	Plasmonics Meets Biology through Optics. <i>Nanomaterials</i> , 2015, 5, 1022-1033.	4.1	1
113	<title>Paint ablation process vs. different laser wavelengths for 18 diverse spray paints used for graffiti on the monuments and historical mansions</title>. , 2010, , .		0
114	Assembly of gold nanorods for highly sensitive detection of heavy metals. , 2012, , .		0
115	Evaluating the NOx Storage Catalysts (NSC) Aging: A Preliminary Analytical Study with Electronic Microscopy. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 1059.	2.5	0
116	Gold Nanorods: Plasmonic Photoheating. , 0, , 1-8.		0
117	Liquid crystalline DNA. , 2017, , 409-421.		0