

# Polona Umek

## List of Publications by Year in descending order

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72  
papers

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citations

257450

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254184

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75  
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75  
docs citations

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times ranked

3099  
citing authors

#	ARTICLE	IF	CITATIONS
1	Aerosol-Assisted CVD-Grown WO <sub>3</sub> Nanoneedles Decorated with Copper Oxide Nanoparticles for the Selective and Humidity-Resilient Detection of H <sub>2</sub> S. ACS Applied Materials & Interfaces, 2015, 7, 6842-6851.	8.0	161
2	Single-Step Deposition of Au- and Pt-Nanoparticle-Functionalized Tungsten Oxide Nanoneedles Synthesized Via Aerosol-Assisted CVD, and Used for Fabrication of Selective Gas Microsensor Arrays. Advanced Functional Materials, 2013, 23, 1313-1322.	14.9	143
3	Air-stable monodispersed MoS <sub>2</sub> nanowires. Nanotechnology, 2004, 15, 635-638.	2.6	112
4	Nanoscale spectroscopy with polarized X-rays by NEXAFS-TXM. Nature Photonics, 2012, 6, 25-29.	31.4	106
5	Addition of Carbon Radicals Generated from Organic Peroxides to Single Wall Carbon Nanotubes. Chemistry of Materials, 2003, 15, 4751-4755.	6.7	104
6	Gold clusters on WO <sub>3</sub> nanoneedles grown via AACVD: XPS and TEM studies. Materials Chemistry and Physics, 2012, 134, 809-813.	4.0	83
7	Sensitive and rapid hydrogen sensors based on Pd-WO <sub>3</sub> thick films with different morphologies. International Journal of Hydrogen Energy, 2013, 38, 2565-2577.	7.1	82
8	Impact of Structure and Morphology on Gas Adsorption of Titanate-Based Nanotubes and Nanoribbons. Chemistry of Materials, 2005, 17, 5945-5950.	6.7	74
9	Synthesis of 3D Hierarchical Self-Assembled Microstructures Formed from Î±-MnO <sub>2</sub> Nanotubes and Their Conducting and Magnetic Properties. Journal of Physical Chemistry C, 2009, 113, 14798-14803.	3.1	67
10	Effects of physicochemical properties of TiO <sub>2</sub> nanomaterials for pulmonary inflammation, acute phase response and alveolar proteinosis in intratracheally exposed mice. Toxicology and Applied Pharmacology, 2020, 386, 114830.	2.8	66
11	CVD growth of self-assembled 2D and 1D WS <sub>2</sub> nanomaterials for the ultrasensitive detection of NO <sub>2</sub> . Sensors and Actuators B: Chemical, 2021, 326, 128813.	7.8	58
12	Parameters optimization for synthesis of Al-doped ZnO nanoparticles by laser ablation in water. Applied Surface Science, 2018, 440, 916-925.	6.1	56
13	Synthesis of single crystalline In <sub>2</sub> O <sub>3</sub> octahedra for the selective detection of NO <sub>2</sub> and H <sub>2</sub> at trace levels. Journal of Materials Chemistry C, 2016, 4, 9418-9427.	5.5	53
14	The Influence of the Reaction Temperature on the Morphology of Sodium Titanate 1D Nanostructures and Their Thermal Stability. Journal of Nanoscience and Nanotechnology, 2007, 7, 3502-3508.	0.9	47
15	Interplay between nematic ordering and thermomechanical response in a side-chain liquid single crystal elastomer containing pendant azomesogen units. Polymer, 2009, 50, 4837-4844.	3.8	38
16	SO <sub>2</sub> Gas Sensors based on WO <sub>3</sub> Nanostructures with Different Morphologies. Procedia Engineering, 2012, 47, 1033-1036.	1.2	37
17	Protein Corona Prevents TiO <sub>2</sub> Phototoxicity. PLoS ONE, 2015, 10, e0129577.	2.5	35
18	Microsensors based on Pt-nanoparticle functionalised tungsten oxide nanoneedles for monitoring hydrogen sulfide. RSC Advances, 2014, 4, 1489-1495.	3.6	30

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19	Protonated titanate nanotubes as solid acid catalyst for aldol condensation. <i>Journal of Catalysis</i> , 2017, 346, 161-169.	6.2	30
20	AACVD and gas sensing properties of nickel oxide nanoparticle decorated tungsten oxide nanowires. <i>Journal of Materials Chemistry C</i> , 2018, 6, 5181-5192.	5.5	30
21	Transformation of hydrogen titanate nanoribbons to TiO <sub>2</sub> nanoribbons and the influence of the transformation strategies on the photocatalytic performance. <i>Beilstein Journal of Nanotechnology</i> , 2015, 6, 831-844.	2.8	29
22	A study of thermal properties of sodium titanate nanotubes synthesized by microwave-assisted hydrothermal method. <i>Materials Research Bulletin</i> , 2015, 71, 98-105.	5.2	29
23	Towards Stable and Conductive Titanium Oxynitride High Surface Area Support for Iridium Nanoparticles as Oxygen Evolution Reaction Electrocatalyst. <i>ChemCatChem</i> , 2019, 11, 5038-5044.	3.7	29
24	Coordination of Intercalated Cu <sup>2+</sup> Sites in Copper Doped Sodium Titanate Nanotubes and Nanoribbons. <i>Journal of Physical Chemistry C</i> , 2008, 112, 15311-15319.	3.1	28
25	Nanoparticles Can Wrap Epithelial Cell Membranes and Relocate Them Across the Epithelial Cell Layer. <i>Nano Letters</i> , 2018, 18, 5294-5305.	9.1	27
26	WO <sub>3</sub> nanowires loaded with cobalt oxide nanoparticles, deposited by a two-step AACVD for gas sensing applications. <i>Sensors and Actuators B: Chemical</i> , 2019, 298, 126868.	7.8	26
27	Graphene Loading with Polypyrrole Nanoparticles for Trace-Level Detection of Ammonia at Room Temperature. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 40909-40921.	8.0	24
28	Mn <sup>2+</sup> Substitutional Doping of TiO <sub>2</sub> Nanoribbons: A Three-Step Approach. <i>Journal of Physical Chemistry C</i> , 2014, 118, 21250-21257.	3.1	23
29	Towards atomic resolution in sodium titanate nanotubes using near-edge X-ray-absorption fine-structure spectromicroscopy combined with multichannel multiple-scattering calculations. <i>Beilstein Journal of Nanotechnology</i> , 2012, 3, 789-797.	2.8	22
30	The control of the diameter and length of $\gamma$ -MnO <sub>2</sub> nanorods by regulation of reaction parameters and their thermogravimetric properties. <i>Materials Research Bulletin</i> , 2011, 46, 278-284.	5.2	20
31	Controlling Disorder and Superconductivity in Titanium Oxynitride Nanoribbons with Anion Exchange. <i>ACS Nano</i> , 2015, 9, 10133-10141.	14.6	20
32	Gas Sensing with Iridium Oxide Nanoparticle Decorated Carbon Nanotubes. <i>Sensors</i> , 2019, 19, 113.	3.8	20
33	Structural and mechanical properties of polystyrene nanocomposites with 1D titanate nanostructures prepared by an extrusion process. <i>Polymer Composites</i> , 2009, 30, 1318-1325.	4.6	19
34	Bacteria Exposed to Silver Nanoparticles Synthesized by Laser Ablation in Water: Modelling E. coli Growth and Inactivation. <i>Materials</i> , 2020, 13, 653.	2.9	19
35	Synthesis and Characterization of Ag/ZnO Nanoparticles for Bacteria Disinfection in Water. <i>Nanomaterials</i> , 2022, 12, 1764.	4.1	19
36	Synthesis, structure, and magnetic properties of iron-oxide nanowires. <i>Journal of Materials Research</i> , 2006, 21, 2955-2962.	2.6	18

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37	Hydrothermal Synthesis of Two Dimensional WO <sub>3</sub> Nanostructures for NO <sub>2</sub> Detection in the ppb-level. <i>Procedia Engineering</i> , 2012, 47, 228-231.	1.2	17
38	Synthesis of Al-doped ZnO nanoparticles by laser ablation of ZnO:Al <sub>2</sub> O <sub>3</sub> target in water. <i>Materials Research Express</i> , 2017, 4, 105003.	1.6	17
39	Synthesis and Cathodoluminescence of Undoped and Cr <sup>3+</sup> -Doped Sodium Titanate Nanotubes and Nanoribbons. <i>Journal of Physical Chemistry C</i> , 2010, 114, 8192-8198.	3.1	15
40	Effect of inorganic 1D nanoparticles on electrooptic properties of 5CB liquid crystal. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 2328-2334.	1.8	14
41	Stabilisation of 2D colloidal assemblies by polymerisation of liquid crystalline matrices for photonic applications. <i>Soft Matter</i> , 2014, 10, 5797-5803.	2.7	14
42	Fluctuation-induced tunneling in TiO <sub>2</sub> -derived nanotube pellets. <i>Journal of Applied Physics</i> , 2007, 101, 084308.	2.5	13
43	Charge separation and ROS generation on tubular sodium titanates exposed to simulated solar light. <i>Applied Surface Science</i> , 2019, 470, 1053-1063.	6.1	13
44	Local Coordination and Valence States of Cobalt in Sodium Titanate Nanoribbons. <i>Journal of Physical Chemistry C</i> , 2012, 116, 11357-11363.	3.1	12
45	Chemical Bond Modification upon Phase Transformation of TiO <sub>2</sub> Nanoribbons Revealed by Nanoscale X-ray Linear Dichroism. <i>Journal of Physical Chemistry C</i> , 2017, 121, 17038-17042.	3.1	12
46	Tungsten trioxide nanowires decorated with iridium oxide nanoparticles as gas sensing material. <i>Journal of Alloys and Compounds</i> , 2020, 812, 152156.	5.5	11
47	Individual Titanate Nanoribbons Studied by 3D-Resolved Polarization Dependent X-ray Absorption Spectra Measured with Scanning Transmission X-ray Microscopy. <i>Journal of Physical Chemistry C</i> , 2015, 119, 24192-24200.	3.1	10
48	Surface deposited one-dimensional copper-doped TiO <sub>2</sub> nanomaterials for prevention of health care acquired infections. <i>PLoS ONE</i> , 2018, 13, e0201490.	2.5	10
49	Synthesis of silane functionalized sodium titanate nanotubes and their influence on thermal and mechanical properties of epoxy nanocomposite. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 2284-2291.	1.8	9
50	The impact of K <sup>+</sup> content on the structural transformations and morphological changes during the thermal treatment of $\lambda$ -MnO <sub>2</sub> nanorods. <i>Materials Research Bulletin</i> , 2012, 47, 1523-1528.	5.2	8
51	Sol-gel functionalization of sodium TiO <sub>2</sub> nanotubes and nanoribbons with aminosilane molecules. <i>Ceramics International</i> , 2013, 39, 9459-9464.	4.8	8
52	Eu <sup>3+</sup> doped titanium oxide nanoparticles for optical thermometry in the first biological window. <i>Optical Materials</i> , 2020, 101, 109770.	3.6	8
53	Photocatalytic self-cleaning properties of Mo:TiO <sub>2</sub> loaded Zn-Al layered double hydroxide synthesised at optimised pH value for the application on mineral substrates. <i>Ceramics International</i> , 2020, 46, 6756-6766.	4.8	7
54	Functionalization of sodium titanate nanoribbons with silanes and their use in the reinforcement of epoxy nanocomposites. <i>Polymer Composites</i> , 2013, 34, 1382-1388.	4.6	6

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55	Structural properties and thermal stability of cobalt- and chromium-doped $\text{MnO}_2$ nanorods. <i>Beilstein Journal of Nanotechnology</i> , 2017, 8, 1032-1042.	2.8	6
56	Role of Water in the Transformation of Protonated Titanate Nanoribbons to Anatase Nanoribbons. <i>Journal of Physical Chemistry C</i> , 2019, 123, 23747-23757.	3.1	6
57	The impact of ageing on the magnetic properties of $\text{Cu}(\text{OH})_2$ nanoribbons. <i>Nanotechnology</i> , 2005, 16, 1623-1629.	2.6	5
58	Photocatalytic disinfection of surfaces with copper doped $\text{TiO}_2$ nanotube coatings illuminated by ceiling mounted fluorescent light. <i>PLoS ONE</i> , 2018, 13, e0197308.	2.5	5
59	Photocatalytic biocidal effect of copper doped $\text{TiO}_2$ nanotube coated surfaces under laminar flow, illuminated with UVA light on <i>Legionella pneumophila</i> . <i>PLoS ONE</i> , 2020, 15, e0227574.	2.5	5
60	Flumequine-loaded titanate nanotubes as antibacterial agents for aquaculture farms. <i>RSC Advances</i> , 2022, 12, 5953-5963.	3.6	5
61	Single-step co-deposition of nanostructured tungsten oxide supported gold nanoparticles using a gold-phosphine cluster complex as the gold precursor. <i>Science and Technology of Advanced Materials</i> , 2014, 15, 065004.	6.1	4
62	Controlled Growth and Applications of Carbon Nanotubes. <i>Chimia</i> , 2002, 56, 547-552.	0.6	3
63	Synthesis and Characterization of $\text{Mo}_6\text{S}_4.5\text{I}_4.5$ Nanowires. <i>Journal of Nanoscience and Nanotechnology</i> , 2007, 7, 982-985.	0.9	3
64	Nanoscale NEXAFS for Probing TiCh-B Nanoribbons.. <i>Microscopy and Microanalysis</i> , 2018, 24, 474-475.	0.4	3
65	Single cell temperature probed by $\text{Eu}^{3+}$ doped $\text{TiO}_2$ nanoparticles luminescence. <i>Nano Select</i> , 2021, 2, 1208-1217.	3.7	3
66	$\text{Nd}^{3+}$ -Doped $\text{TiO}_2$ Nanoparticles as Nanothermometer: High Sensitivity in Temperature Evaluation inside Biological Windows. <i>Sensors</i> , 2021, 21, 5306.	3.8	3
67	Iron-Modified Titanate Nanorods for Oxidation of Aqueous Ammonia Using Combined Treatment with Ozone and Solar Light Irradiation. <i>Catalysts</i> , 2022, 12, 666.	3.5	3
68	Synthesis and Characterization of Sodium Titanate and $\text{TiO}_2$ Nanostructures Loaded with Silver Nanoparticles. , 2011, , .		2
69	Sensors: Single-Step Deposition of Au- and Pt-Nanoparticle-Functionalized Tungsten Oxide Nanoneedles Synthesized Via Aerosol-Assisted CVD, and Used for Fabrication of Selective Gas Microsensor Arrays ( <i>Adv. Funct. Mater.</i> 10/2013). <i>Advanced Functional Materials</i> , 2013, 23, 1226-1226.	14.9	2
70	How to control fluorescent labeling of metal oxide nanoparticles for artefact-free live cell microscopy. <i>Nanotoxicology</i> , 2021, 15, 1102-1123.	3.0	2
71	Non-linear resonance Raman cross-section in single-wall carbon nanotubes at low excitation laser powers. <i>AIP Conference Proceedings</i> , 2001, , .	0.4	0
72	Disease Prediction: Prediction of Chronic Inflammation for Inhaled Particles: the Impact of Material Cycling and Quarantining in the Lung Epithelium ( <i>Adv. Mater.</i> 47/2020). <i>Advanced Materials</i> , 2020, 32, .	21.0	0