

Tomáš Homola

List of Publications by Year in descending order

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59
papers

967
citations

394421

19
h-index

501196

28
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60
all docs

60
docs citations

60
times ranked

1237
citing authors

#	ARTICLE	IF	CITATIONS
1	Atmospheric pressure diffuse plasma in ambient air for ITO surface cleaning. <i>Applied Surface Science</i> , 2012, 258, 7135-7139.	6.1	75
2	Plasma Treatment of Glass Surfaces Using Diffuse Coplanar Surface Barrier Discharge in Ambient Air. <i>Plasma Chemistry and Plasma Processing</i> , 2013, 33, 881-894.	2.4	66
3	Activation of poly(methyl methacrylate) surfaces by atmospheric pressure plasma. <i>Polymer Degradation and Stability</i> , 2012, 97, 886-892.	5.8	41
4	Activation of poly(ethylene terephthalate) surfaces by atmospheric pressure plasma. <i>Polymer Degradation and Stability</i> , 2012, 97, 2249-2254.	5.8	39
5	Surface analysis of poly(ethylene naphthalate) (PEN) films treated at atmospheric pressure using diffuse coplanar surface barrier discharge in air and in nitrogen. <i>Polymer Degradation and Stability</i> , 2012, 97, 547-553.	5.8	36
6	Multi-hollow surface dielectric barrier discharge: an ozone generator with flexible performance and supreme efficiency. <i>Plasma Sources Science and Technology</i> , 2020, 29, 095014.	3.1	36
7	Atmospheric Plasma Surface Activation of Poly(Ethylene Terephthalate) Film for Roll-To-Roll Application of Transparent Conductive Coating. <i>Journal of Adhesion</i> , 2014, 90, 296-309.	3.0	34
8	Low temperature temporal and spatial atomic layer deposition of TiO ₂ films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2015, 33, .	2.1	34
9	An Array of Micro-hollow Surface Dielectric Barrier Discharges for Large-Area Atmospheric-Pressure Surface Treatments. <i>Plasma Chemistry and Plasma Processing</i> , 2017, 37, 1149-1163.	2.4	33
10	Enhancement of electrical properties of flexible ITO/PET by atmospheric pressure roll-to-roll plasma. <i>Materials Science in Semiconductor Processing</i> , 2018, 75, 95-102.	4.0	29
11	Fast and Low-Temperature (70 °C) Mineralization of Inkjet Printed Mesoporous TiO ₂ Photoanodes Using Ambient Air Plasma. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 33562-33571.	8.0	28
12	Atmospheric Dry Hydrogen Plasma Reduction of Inkjet-Printed Flexible Graphene Oxide Electrodes. <i>ChemSusChem</i> , 2018, 11, 941-947.	6.8	28
13	Efficiency of Ozone Production in Coplanar Dielectric Barrier Discharge. <i>Plasma Chemistry and Plasma Processing</i> , 2019, 39, 1227-1242.	2.4	28
14	Plasma-assisted agriculture: history, presence, and prospects—a review. <i>European Physical Journal D</i> , 2021, 75, 1.	1.3	28
15	Efficient solar photocatalytic activity of TiO ₂ coated nano-porous silicon by atomic layer deposition. <i>Superlattices and Microstructures</i> , 2016, 97, 155-166.	3.1	26
16	A comparison of photolytic, photochemical and photocatalytic processes for disinfection of recirculation aquaculture systems (RAS) streams. <i>Water Research</i> , 2020, 181, 115928.	11.3	26
17	Low-temperature (70 °C) ambient air plasma-fabrication of inkjet-printed mesoporous TiO ₂ flexible photoanodes. <i>Flexible and Printed Electronics</i> , 2017, 2, 035010.	2.7	24
18	Activation of polycarbonate (PC) surfaces by atmospheric pressure plasma in ambient air. <i>Polymer Testing</i> , 2018, 67, 428-434.	4.8	23

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19	Photoelectrocatalytic activity of ZnO coated nano-porous silicon by atomic layer deposition. RSC Advances, 2016, 6, 25173-25178.	3.6	22
20	Perovskite Solar Cells with Low-Cost TiO ₂ Mesoporous Photoanodes Prepared by Rapid Low-Temperature (70 °C) Plasma Processing. ACS Applied Energy Materials, 2020, 3, 12009-12018.	5.1	21
21	Catalytic Performance of Ag ₂ O and Ag Doped CeO ₂ Prepared by Atomic Layer Deposition for Diesel Soot Oxidation. Coatings, 2018, 8, 237.	2.6	19
22	Solar photocatalytic disinfection using ink-jet printed composite TiO ₂ /SiO ₂ thin films on flexible substrate: Applicability to drinking and marine water. Solar Energy, 2019, 191, 518-529.	6.1	19
23	Mechanical properties of atomic layer deposited Al ₂ O ₃ /ZnO nanolaminates. Surface and Coatings Technology, 2015, 284, 198-205.	4.8	16
24	Structural and morphological characterization of Al ₂ O ₃ coated macro-porous silicon by atomic layer deposition. Thin Solid Films, 2016, 616, 628-634.	1.8	15
25	Ambient air plasma pre-treatment of non-woven fabrics for deposition of antibacterial poly(ϵ -lactide) nanoparticles. Plasma Processes and Polymers, 2017, 14, 1600231.	3.0	14
26	Attachment of Poly(ϵ -lactide) Nanoparticles to Plasma-Treated Non-Woven Polymer Fabrics Using Inkjet Printing. Macromolecular Bioscience, 2015, 15, 1274-1282.	4.1	12
27	Structural and Optical Properties of Luminescent Copper(I) Chloride Thin Films Deposited by Sequentially Pulsed Chemical Vapour Deposition. Coatings, 2018, 8, 369.	2.6	12
28	Multi-hollow surface dielectric barrier discharge for plasma treatment of patterned silicon surfaces. Surfaces and Interfaces, 2019, 16, 181-187.	3.0	12
29	Effects of corona space charge polarity and liquid phase ion mobility on the shape and velocities of water jets in the spindle jet and precession modes of water electro-spray. Journal of Aerosol Science, 2016, 101, 196-206.	3.8	11
30	Optimization of TiO ₂ Mesoporous Photoanodes Prepared by Inkjet Printing and Low-Temperature Plasma Processing. Plasma Chemistry and Plasma Processing, 2020, 40, 1311-1330.	2.4	11
31	Direct treatment of pepper (<i>Capsicum annum</i> L.) and melon (<i>Cucumis melo</i>) seeds by amplitude-modulated dielectric barrier discharge in air. Journal of Applied Physics, 2021, 129, .	2.5	11
32	Surface chemistry and initial growth of Al ₂ O ₃ on plasma modified PTFE studied by ALD. Surfaces and Interfaces, 2017, 6, 223-228.	3.0	10
33	Hafnium oxide thin films as a barrier against copper diffusion in solar absorbers. Solar Energy Materials and Solar Cells, 2017, 166, 140-146.	6.2	10
34	A Comparison of the Effects of Ambient Air Plasma Generated by Volume and by Coplanar DBDs on the Surfaces of PP/Al/PET Laminated Foil. IEEE Transactions on Plasma Science, 2018, 46, 3653-3661.	1.3	10
35	Nucleation and initial growth of atomic layer deposited titanium oxide determined by spectroscopic ellipsometry and the effect of pretreatment by surface barrier discharge. Applied Surface Science, 2015, 345, 216-222.	6.1	9
36	Atomic layer deposition of cerium oxide for potential use in diesel soot combustion. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	2.1	9

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37	A Study on the Effect of Ambient Air Plasma Treatment on the Properties of Methylammonium Lead Halide Perovskite Films. <i>Metals</i> , 2019, 9, 991.	2.3	9
38	UVA and solar driven photocatalysis with rGO/TiO ₂ /polysiloxane for inactivation of pathogens in recirculation aquaculture systems (RAS) streams. <i>Chemical Engineering Journal Advances</i> , 2022, 10, 100243.	5.2	9
39	Inactivation of simulated aquaculture stream bacteria at low temperature using advanced UVA- and solar-based oxidation methods. <i>Solar Energy</i> , 2021, 227, 477-489.	6.1	8
40	The influence of curing methods on the physico-chemical properties of printed mesoporous titania patterns reinforced by methylsilica binder. <i>Catalysis Today</i> , 2018, 313, 26-32.	4.4	7
41	Surface Property Tuning of Methylammonium Lead Iodide by Plasma for Use in Planar Perovskite Solar Cells. <i>ACS Omega</i> , 2020, 5, 18384-18390.	3.5	7
42	Low-Temperature and Rapid Deposition of an SnO ₂ Layer from a Colloidal Nanoparticle Dispersion for Use in Planar Perovskite Solar Cells. <i>Energy Technology</i> , 2021, 9, 2001076.	3.8	7
43	Graphene oxide sensors of high sensitivity fabricated using cold atmospheric-pressure hydrogen plasma for use in the detection of small organic molecules. <i>Journal of Applied Physics</i> , 2020, 128, .	2.5	7
44	The effect of secondary dopants on screen-printed PEDOT:PSS counter-electrodes for dye-sensitized solar cells. <i>Journal of Applied Polymer Science</i> , 2022, 139, 51929.	2.6	7
45	Mineralization of flexible mesoporous TiO ₂ photoanodes using two low-temperature dielectric barrier discharges in ambient air. <i>Contributions To Plasma Physics</i> , 2019, 59, 102-110.	1.1	6
46	The effect of rapid atmospheric plasma treatment of FTO substrates on the quality of TiO ₂ blocking layers for printed perovskite solar cells. <i>Materials Science in Semiconductor Processing</i> , 2021, 131, 105850.	4.0	6
47	A New Approach to the Crystallization of Perovskite Films by Cold Hydrogen Atmospheric Pressure Plasma. <i>Plasma Chemistry and Plasma Processing</i> , 2020, 40, 539-548.	2.4	3
48	Low-Temperature Mineralisation of Titania-Siloxane Composite Layers. <i>Catalysts</i> , 2021, 11, 50.	3.5	3
49	Rapid Atmospheric Pressure Ambient Air Plasma Functionalization of Poly(styrene) and Poly(ethersulfone) Foils. <i>Plasma Chemistry and Plasma Processing</i> , 2021, 41, 841-854.	2.4	3
50	Non-hydrolytic sol-gel route to a family of hybrid mesoporous aluminosilicate ethanol dehydration catalysts. <i>Journal of Materials Science</i> , 2021, 56, 14001-14018.	3.7	3
51	ATMOSPHERIC PLASMA TREATMENT OF ITO THIN FILMS FOR RAPID MANUFACTURING OF PEROVSKITE SOLAR CELLS. , 2020, , .		2
52	Nano-modification of Si-wafer surfaces using low-cost ambient air diffuse plasma. <i>International Journal of Nanomanufacturing</i> , 2015, 11, 237.	0.3	1
53	The effect of atmospheric cold plasma cleaning of FTO substrates on the quality of TiO ₂ electron transport layers for printed carbon-based perovskite solar cells. , 2020, , .		1
54	LARGE-AREA ROLL-TO-ROLL ATMOSPHERIC PLASMA TREATMENT OF NANOCELLULOSE TRANSPARENT PAPER. , 2020, , .		1

#	ARTICLE	IF	CITATIONS
55	Conductive silver films on paper prepared by atmospheric pressure argon plasma conversion of silver nitrate. , 2020, , .		0
56	LOW-TEMPERATURE HYDROGEN PLASMA REDUCTION OF GRAPHENE OXIDE COUNTER ELECTRODES FOR PRINTED DYE-SENSITIZED SOLAR CELLS. , 2020, , .		0
57	LOW-COST AND HIGH-SPEED ATMOSPHERIC PLASMA PROCESSING OF PEROVSKITE THIN FILMS. , 2020, , .		0
58	Structural and magnetic properties of Fe-oxide layers prepared by inkjet printing on Si-substrate. , 2020, , .		0
59	PLASMA Oxidation of printed polysiloxane layers. , 2021, , .		0