

Jaana Vapaavuori

List of Publications by Year in descending order

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54
papers

1,906
citations

331259

21
h-index

253896

43
g-index

54
all docs

54
docs citations

54
times ranked

2405
citing authors

#	ARTICLE	IF	CITATIONS
1	Long and entangled native cellulose I nanofibers allow flexible aerogels and hierarchically porous templates for functionalities. <i>Soft Matter</i> , 2008, 4, 2492.	1.2	595
2	Hydrogen-Bonded Polymer~Azobenzene Complexes: Enhanced Photoinduced Birefringence with High Temporal Stability through Interplay of Intermolecular Interactions. <i>Chemistry of Materials</i> , 2008, 20, 6358-6363.	3.2	111
3	Supramolecular design principles for efficient photoresponsive polymer~azobenzene complexes. <i>Journal of Materials Chemistry C</i> , 2018, 6, 2168-2188.	2.7	94
4	Supramolecular hierarchy among halogen and hydrogen bond donors in light-induced surface patterning. <i>Journal of Materials Chemistry C</i> , 2015, 3, 759-768.	2.7	87
5	Submolecular Plasticization Induced by Photons in Azobenzene Materials. <i>Journal of the American Chemical Society</i> , 2015, 137, 13510-13517.	6.6	76
6	Photoinduced surface-relief gratings in films of supramolecular polymer~bisazobenzene complexes. <i>Journal of Materials Chemistry</i> , 2010, 20, 5260.	6.7	70
7	Surface-Relief Gratings and Stable Birefringence Inscribed Using Light of Broad Spectral Range in Supramolecular Polymer-Bisazobenzene Complexes. <i>Journal of Physical Chemistry C</i> , 2012, 116, 2363-2370.	1.5	57
8	Are Two Azo Groups Better than One? Investigating the Photoresponse of Polymer-Bisazobenzene Complexes. <i>Chemistry of Materials</i> , 2014, 26, 5089-5096.	3.2	57
9	Efficient surface structuring and photoalignment of supramolecular polymer~azobenzene complexes through rational chromophore design. <i>Journal of Materials Chemistry</i> , 2011, 21, 15437.	6.7	55
10	Light-Driven Surface Patterning of Supramolecular Polymers with Extremely Low Concentration of Photoactive Molecules. <i>ACS Macro Letters</i> , 2014, 3, 1196-1200.	2.3	52
11	Nanocellulose aerogel membranes for optimal electrolyte filling in dye solar cells. <i>Nano Energy</i> , 2014, 8, 95-102.	8.2	51
12	Plant~Based Structures as an Opportunity to Engineer Optical Functions in Next~Generation Light Management. <i>Advanced Materials</i> , 2022, 34, e2104473.	11.1	48
13	From partial to complete optical erasure of azobenzene~polymer gratings: effect of molecular weight. <i>Journal of Materials Chemistry C</i> , 2015, 3, 11011-11016.	2.7	46
14	Nanoindentation study of light-induced softening of supramolecular and covalently functionalized azo polymers. <i>Journal of Materials Chemistry C</i> , 2013, 1, 2806.	2.7	34
15	Cellulose Nanocrystal Aerogels as Electrolyte Scaffolds for Glass and Plastic Dye-Sensitized Solar Cells. <i>ACS Applied Energy Materials</i> , 2019, 2, 5635-5642.	2.5	29
16	Photomechanical Energy Transfer to Photopassive Polymers through Hydrogen and Halogen Bonds. <i>Macromolecules</i> , 2015, 48, 7535-7542.	2.2	27
17	Influence of Supramolecular Interaction Type on Photoresponsive Azopolymer Complexes: A Surface Relief Grating Formation Study. <i>Macromolecules</i> , 2016, 49, 4923-4934.	2.2	27
18	2.5D Hierarchical Structuring of Nanocomposite Hydrogel Films Containing Cellulose Nanocrystals. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 6325-6335.	4.0	25

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19	Patterned Cellulose Nanocrystal Aerogel Films with Tunable Dimensions and Morphologies as Ultra-Porous Scaffolds for Cell Culture. <i>ACS Applied Nano Materials</i> , 2019, 2, 4169-4179.	2.4	25
20	Biowaste-derived electrode and electrolyte materials for flexible supercapacitors. <i>Chemical Engineering Journal</i> , 2022, 435, 135058.	6.6	25
21	Self-orienting liquid crystal doped with polymer-azo-dye complex. <i>Optical Materials Express</i> , 2011, 1, 1463.	1.6	24
22	Biomimetic zinc chlorinâ€“poly(4-vinylpyridine) assemblies: doping level dependent emissionâ€“absorption regimes. <i>Journal of Materials Chemistry C</i> , 2013, 1, 2166.	2.7	24
23	Supramolecular control of liquid crystals by doping with halogen-bonding dyes. <i>RSC Advances</i> , 2017, 7, 40237-40242.	1.7	18
24	Recent progress in flexible dye solar cells. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , 2018, 7, e302.	1.9	18
25	Nanocellulose and Nanochitin Cryogels Improve the Efficiency of Dye Solar Cells. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 10257-10265.	3.2	18
26	The Orange Side of Disperse Red 1: Humidityâ€“Driven Color Switching in Supramolecular Azoâ€“Polymer Materials Based on Reversible Dye Aggregation. <i>Macromolecular Rapid Communications</i> , 2017, 38, 1600582.	2.0	17
27	Molecular-Level Study of Photoorientation in Hydrogen-Bonded Azopolymer Complexes. <i>Macromolecules</i> , 2018, 51, 1077-1087.	2.2	16
28	In Situ Photocontrol of Block Copolymer Morphology During Dip-Coating of Thin Films. <i>ACS Macro Letters</i> , 2015, 4, 1158-1162.	2.3	15
29	Polysulfobetaine-surfactant solutions and their use in stabilizing hydrophobic compounds in saline solution. <i>Polymer</i> , 2017, 127, 77-87.	1.8	15
30	A Supramolecular Approach to Photoresponsive Thermo/Solvoplastic Block Copolymer Elastomers. <i>Macromolecules</i> , 2014, 47, 7099-7108.	2.2	13
31	Photoinduced surface patterning of azobenzene-containing supramolecular dendrons, dendrimers and dendronized polymers. <i>Optical Materials Express</i> , 2013, 3, 711.	1.6	12
32	Photoactive/Passive Molecular Glass Blends: An Efficient Strategy to Optimize Azomaterials for Surface Relief Grating Inscription. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 798-808.	4.0	12
33	Micro- and nanocelluloses from non-wood waste sources; processes and use in industrial applications. <i>Soft Matter</i> , 2021, 17, 9842-9858.	1.2	12
34	Perspective about Cellulose-Based Pressure and Strain Sensors for Human Motion Detection. <i>Biosensors</i> , 2022, 12, 187.	2.3	12
35	An open-source camera system for experimental measurements. <i>SoftwareX</i> , 2021, 14, 100688.	1.2	11
36	Tuning the Porosity, Water Interaction, and Redispersion of Nanocellulose Hydrogels by Osmotic Dehydration. <i>ACS Applied Polymer Materials</i> , 2022, 4, 24-28.	2.0	11

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37	Multiscale Hierarchical Surface Patterns by Coupling Optical Patterning and Thermal Shrinkage. ACS Applied Materials & Interfaces, 2021, 13, 15563-15571.	4.0	9
38	Controllable Production of Ag/Zn and Ag Particles from Hydrometallurgical Zinc Solutions. ACS Sustainable Chemistry and Engineering, 2021, 9, 8186-8197.	3.2	9
39	Stability improvement of MAPbI ₃ -based perovskite solar cells using a photoactive solid-solid phase change material. Journal of Alloys and Compounds, 2022, 897, 163142.	2.8	8
40	Taming Macromolecules with Light: Lessons Learned from Vibrational Spectroscopy. Macromolecular Rapid Communications, 2018, 39, 1700430.	2.0	6
41	Dynamically Evolving Surface Patterns through Light-Triggered Wrinkling Erasure. Langmuir, 2019, 35, 875-881.	1.6	6
42	Enhanced nonlinearity by H-bonded polymer-dye complex in liquid crystal for holographic gratings. Journal of the Optical Society of America B: Optical Physics, 2014, 31, 1456.	0.9	4
43	Photocontrol of Supramolecular Azo-Containing Block Copolymer Thin Films during Dip-Coating: Toward Nanoscale Patterned Coatings. ACS Applied Nano Materials, 2019, 2, 3526-3537.	2.4	4
44	Understanding nanodomain morphology formation in dip-coated PS- <i>b</i> -PEO thin films. Nanoscale Advances, 2021, 3, 4996-5007.	2.2	4
45	Transparent conductive electrode based on LBL deposition of graphene oxide and copper nanowires. Materials Letters, 2022, 311, 131632.	1.3	4
46	Photobreathing Zwitterionic Micelles. ChemSystemsChem, 2019, 1, e1900018.	1.1	3
47	Effect of hydrogen-bond strength on photoresponsive properties of polymer-azobenzene complexes. Canadian Journal of Chemistry, 2020, 98, 531-538.	0.6	3
48	Update on women in physics in Finland. AIP Conference Proceedings, 2019, , .	0.3	2
49	Ultrathin-Walled 3D Inorganic Nanostructured Networks Templated from Cross-Linked Cellulose Nanocrystal Aerogels. Advanced Materials Interfaces, 2021, 8, 2001181.	1.9	2
50	Textile integrable mechanochromic strain sensor based on the interplay of supramolecular interactions. Materials and Design, 2021, 212, 110175.	3.3	2
51	Molecular-Level Photo-Orientation Insights into Macroscopic Photo-Induced Motion in Azobenzene-Containing Polymer Complexes. Journal of Physical Chemistry B, 2021, 125, 7871-7885.	1.2	1
52	Update on women in physics in Finland. AIP Conference Proceedings, 2015, , .	0.3	0
53	Fast formation of a supramolecular ion gel/solvoplastic elastomer with excellent stretchability. Royal Society Open Science, 2018, 5, 180271.	1.1	0
54	Probing interfacial interactions and dynamics of polymers enclosed in boron nitride nanotubes. Journal of Polymer Science, 2022, 60, 233-243.	2.0	0