Mauri A Kostiainen

List of Publications by Year
in descending order

138 papers	7,889 citations	44069 48 h-index	56724 83 g-index
148 all docs	148 docs citations	148 times ranked	7842 citing authors

#	Article	IF	Citations
1	Properties and chemical modifications of lignin: Towards lignin-based nanomaterials for biomedical applications. Progress in Materials Science, 2018, 93, 233-269.	32.8	526
2	A simple process for lignin nanoparticle preparation. Green Chemistry, 2016, 18, 1416-1422.	9.0	455
3	Electrostatic assembly of binary nanoparticle superlattices using protein cages. Nature Nanotechnology, 2013, 8, 52-56.	31.5	332
4	InÂvitro evaluation of biodegradable lignin-based nanoparticles for drug delivery and enhanced antiproliferation effect in cancer cells. Biomaterials, 2017, 121, 97-108.	11.4	296
5	Virus-Encapsulated DNA Origami Nanostructures for Cellular Delivery. Nano Letters, 2014, 14, 2196-2200.	9.1	254
6	DNA Nanostructures as Smart Drug-Delivery Vehicles and Molecular Devices. Trends in Biotechnology, 2015, 33, 586-594.	9.3	216
7	A modular DNA origami-based enzyme cascade nanoreactor. Chemical Communications, 2015, 51, 5351-5354.	4.1	183
8	Self-assembly and optically triggered disassembly of hierarchical dendronâ€“virus complexes. Nature Chemistry, 2010, 2, 394-399.	13.6	178
9	On the Stability of DNA Origami Nanostructures in Lowâ€Magnesium Buffers. Angewandte Chemie - International Edition, 2018, 57, 9470-9474.	13.8	168
10	Protein Coating of DNA Nanostructures for Enhanced Stability and Immunocompatibility. Advanced Healthcare Materials, 2017, 6, 1700692.	7.6	166
11	Reconfigurable DNA Origami Nanocapsule for pH-Controlled Encapsulation and Display of Cargo. ACS Nano, 2019, 13, 5959-5967.	14.6	157
12	Evolution of Structural DNA Nanotechnology. Advanced Materials, 2018, 30, e1703721.	21.0	145
13	Self-assembly and modular functionalization of three-dimensional crystals from oppositely charged proteins. Nature Communications, 2014, 5, 4445.	12.8	124
14	High-Affinity Multivalent DNA Binding by Using Low-Molecular-Weight Dendrons. Angewandte Chemie - International Edition, 2005, 44, 2556-2559.	13.8	119
15	Plasmonic nanostructures through DNA-assisted lithography. Science Advances, 2018, 4, eaap8978.	10.3	117
16	Toughness and Fracture Properties in Nacreâ€Mimetic Clay/Polymer Nanocomposites. Advanced Functional Materials, 2017, 27, 1605378.	14.9	114
17	Cationic polymers for DNA origami coating â€“ examining their binding efficiency and tuning the enzymatic reaction rates. Nanoscale, 2016, 8, 11674-11680.	5.6	109
18	Chiral Plasmonics Using Twisting along Cellulose Nanocrystals as a Template for Gold Nanoparticles. Advanced Materials, 2016, 28, 5262-5267.	21.0	105

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19	Optically Triggered Release of DNA from Multivalent Dendrons by Degrading and Chargeâ€Switching Multivalency. Angewandte Chemie - International Edition, 2007, 46, 7600-7604.	13.8	103
20	Robotic DNA Nanostructures. ACS Synthetic Biology, 2020, 9, 1923-1940.	3.8	102
21	Functionalization of carboxylated lignin nanoparticles for targeted and pH-responsive delivery of anticancer drugs. Nanomedicine, 2017, 12, 2581-2596.	3.3	96
22	Unraveling the interaction between doxorubicin and DNA origami nanostructures for customizable chemotherapeutic drug release. Nucleic Acids Research, 2021, 49, 3048-3062.	14.5	95
23	Cationic polymer brush-modified cellulose nanocrystals for high-affinity virus binding. Nanoscale, 2014, 6, 11871-11881.	5.6	92
24	Chemical Modification of Reducing Endâ€Groups in Cellulose Nanocrystals. Angewandte Chemie - International Edition, 2021, 60, 66-87.	13.8	83
25	Electrostatic Self-Assembly of Soft Matter Nanoparticle Cocrystals with Tunable Lattice Parameters. ACS Nano, 2015, 9, 11278-11285.	14.6	79
26	Precisely Defined Proteinâ€“Polymer Conjugates: Construction of Synthetic DNA Binding Domains on Proteins by Using Multivalent Dendrons. ACS Nano, 2007, 1, 103-113.	14.6	77
27	Hierarchical Self-Assembly and Optical Disassembly for Controlled Switching of Magnetoferritin Nanoparticle Magnetism. ACS Nano, 2011, 5, 6394-6402.	14.6	75
28	Superhydrophobic Paper from Nanostructured Fluorinated Cellulose Esters. ACS Applied Materials & Interfaces, 2018, 10, 11280-11288.	8.0	75
29	Dendrons with Spermine Surface Groups as Potential Building Blocks for Nonviral Vectors in Gene Therapy. Bioconjugate Chemistry, 2006, 17, 172-178.	3.6	73
30	Cooperative colloidal self-assembly of metal-protein superlattice wires. Nature Communications, 2017, 8, 671.	12.8	73
31	Dynamic DNA Origami Devices: from Strand-Displacement Reactions to External-Stimuli Responsive Systems. International Journal of Molecular Sciences, 2018, 19, 2114.	4.1	73
32	Synthesis of Large Dendrimers with the Dimensions of Small Viruses. Journal of the American Chemical Society, 2013, 135, 4660-4663.	13.7	72
33	Hierarchical Organization of Organic Dyes and Protein Cages into Photoactive Crystals. ACS Nano, 2016, 10, 1565-1571.	14.6	72
34	Closed cycle production of concentrated and dry redispersible colloidal lignin particles with a three solvent polarity exchange method. Green Chemistry, 2018, 20, 843-850.	9.0	72
35	Peptide-guided resiquimod-loaded lignin nanoparticles convert tumor-associated macrophages from M2 to M1 phenotype for enhanced chemotherapy. Acta Biomaterialia, 2021, 133, 231-243.	8.3	72
36	Adsorption of Proteins on Colloidal Lignin Particles for Advanced Biomaterials. Biomacromolecules, 2017, 18, 2767-2776.	5.4	71

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37	Three-Dimensional Protein Cage Array Capable of Active Enzyme Capture and Artificial Chaperone Activity. Nano Letters, 2019, 19, 3918-3924.	9.1	69
38	Realâ€Time Observation of Superstructureâ€Dependent DNA Origami Digestion by DNaseâ€…I Using Highâ€Speed Atomic Force Microscopy. ChemBioChem, 2019, 20, 2818-2823.	2.6	66
39	Multivalent Dendrons for High-Affinity Adhesion of Proteins to DNA. Angewandte Chemie - International Edition, 2006, 45, 3538-3542.	13.8	65
40	Cellular delivery of enzyme-loaded DNA origami. Chemical Communications, 2016, 52, 14161-14164.	4.1	65
41	DNA-Based Enzyme Reactors and Systems. Nanomaterials, 2016, 6, 139.	4.1	63
42	Scaling Up Production of Colloidal Lignin Particles. Nordic Pulp and Paper Research Journal, 2017, 32, 586-596.	0.7	61
43	Electrostatic self-assembly of virusâ€“polymer complexes. Journal of Materials Chemistry, 2011, 21, 2112-2117.	6.7	57
44	Custom-shaped metal nanostructures based on DNA origami silhouettes. Nanoscale, 2015, 7, 11267-11272.	5.6	57
45	Enzymatically and chemically oxidized lignin nanoparticles for biomaterial applications. Enzyme and Microbial Technology, 2018, 111, 48-56.	3.2	57
46	Preparation and Characterization of Dentin Phosphophorynâ€Derived Peptideâ€Functionalized Lignin Nanoparticles for Enhanced Cellular Uptake. Small, 2019, 15, e1901427.	10.0	57
47	One-step large-scale deposition of salt-free DNA origami nanostructures. Scientific Reports, 2015, 5, 15634.	3.3	54
48	Agglomeration of Viruses by Cationic Lignin Particles for Facilitated Water Purification. ACS Sustainable Chemistry and Engineering, 2020, 8, 4167-4177.	6.7	51
49	Temperatureâ€Switchable Assembly of Supramolecular Virusâ€“Polymer Complexes. Advanced Functional Materials, 2011, 21, 2012-2019.	14.9	49
50	DNA nanostructure-directed assembly of metal nanoparticle superlattices. Journal of Nanoparticle Research, 2018, 20, 119.	1.9	49
51	Techno-economic assessment for the large-scale production of colloidal lignin particles. Green Chemistry, 2018, 20, 4911-4919.	9.0	49
52	Self-Assembly of Electrostatic Cocrystals from Supercharged Fusion Peptides and Protein Cages. ACS Macro Letters, 2018, 7, 318-323.	4.8	47
53	Automated design of DNA origami. Nature Biotechnology, 2016, 34, 826-827.	17.5	45
54	Selfâ€Assembly of Amphiphilic Janus Dendrimers into Mechanically Robust Supramolecular Hydrogels for Sustained Drug Release. Chemistry - A European Journal, 2015, 21, 14433-14439.	3.3	43

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55	Superstructure-Dependent Loading of DNA Origami Nanostructures with a Groove-Binding Drug. ACS Omega, 2018, 3, 9441-9448.	3.5	42
56	DNA origami directed 3D nanoparticle superlattice via electrostatic assembly. Nanoscale, 2019, 11, 4546-4551.	5.6	42
57	Highly ordered protein cage assemblies: A toolkit for new materials. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2020, 12, e1578.	6.1	40
58	Janus-Dendrimer-Mediated Formation of Crystalline Virus Assemblies. ACS Macro Letters, 2013, 2, 720-724.	4.8	39
59	Rapid Cationization of Gold Nanoparticles by Twoâ€Step Phase Transfer. Angewandte Chemie - International Edition, 2015, 54, 7990-7993.	13.8	39
60	Structural diversity in metalâ€“organic nanoparticles based on iron isopropoxide treated lignin. RSC Advances, 2016, 6, 31790-31796.	3.6	39
61	Crystalline Cyclophaneâ€“Protein Cage Frameworks. ACS Nano, 2018, 12, 8029-8036.	14.6	39
62	DNA Origami Nanophotonics and Plasmonics at Interfaces. Langmuir, 2018, 34, 14911-14920.	3.5	39
63	Computational Approach for Understanding the Interactions of UV-Degradable Dendrons with DNA and siRNA. Journal of Physical Chemistry B, 2010, 114, 5686-5693.	2.6	38
64	Photoantimicrobial Biohybrids by Supramolecular Immobilization of Cationic Phthalocyanines onto Cellulose Nanocrystals. Chemistry - A European Journal, 2017, 23, 4320-4326.	3.3	38
65	Light-Fuelled Transport of Large Dendrimers and Proteins. Journal of the American Chemical Society, 2014, 136, 6850-6853.	13.7	37
66	Effect of PEGâ€“PDMAEMA Block Copolymer Architecture on Polyelectrolyte Complex Formation with Heparin. Biomacromolecules, 2016, 17, 2891-2900.	5.4	37
67	Generation-Dependent Molecular Recognition Controls Self-Assembly in Supramolecular Dendronâ^Virus Complexes. Nano Letters, 2011, 11, 723-728.	9.1	36
68	Colloidal Lignin Particles as Adhesives for Soft Materials. Nanomaterials, 2018, 8, 1001.	4.1	33
69	Lowâ€Molecularâ€Weight Dendrons for DNA Binding and Release by Reductionâ€Triggered Degradation of Multivalent Interactions. Chemistry - A European Journal, 2009, 15, 5656-5660.	3.3	32
70	Radiolabeled Molecular Imaging Probes for the In Vivo Evaluation of Cellulose Nanocrystals for Biomedical Applications. Biomacromolecules, 2019, 20, 674-683.	5.4	32
71	Systematic in vitro biocompatibility studies of multimodal cellulose nanocrystal and lignin nanoparticles. Journal of Biomedical Materials Research - Part A, 2020, 108, 770-783.	4.0	32
72	On the Stability of DNA Origami Nanostructures in Lowâ€Magnesium Buffers. Angewandte Chemie, 2018, 130, 9614-9618.	2.0	29

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73	DNAâ€Origamiâ€Templated Growth of Multilamellar Lipid Assemblies. Angewandte Chemie - International Edition, 2021, 60, 827-833.	13.8	29
74	Environmentâ€Dependent Stability and Mechanical Properties of DNA Origami Sixâ€Helix Bundles with Different Crossover Spacings. Small, 2022, 18, e2107393.	10.0	29
75	Advanced DNA Nanopore Technologies. ACS Applied Bio Materials, 2020, 3, 5606-5619.	4.6	27
76	Optically Degradable Dendrons for Temporary Adhesion of Proteins to DNA. Chemistry - A European Journal, 2010, 16, 6912-6918.	3.3	26
77	Disulfide-Functionalized Unimolecular Micelles as Selective Redox-Responsive Nanocarriers. Biomacromolecules, 2015, 16, 2872-2883.	5.4	26
78	A supramolecular hostâ€“guest complex for heparin binding and sensing. Nanoscale, 2018, 10, 14022-14030.	5.6	25
79	Phthalocyanineâ€“Virus Nanofibers as Heterogeneous Catalysts for Continuousâ€Flow Photoâ€Oxidation Processes. Advanced Materials, 2019, 31, e1902582.	21.0	25
80	Scaling Up DNA Origami Lattice Assembly. Chemistry - A European Journal, 2021, 27, 8564-8571.	3.3	25
81	Biomimetic zinc chlorinâ€“poly(4-vinylpyridine) assemblies: doping level dependent emissionâ€“absorption regimes. Journal of Materials Chemistry C, 2013, 1, 2166.	5.5	24
82	Nanometrology and super-resolution imaging with DNA. MRS Bulletin, 2017, 42, 951-959.	3.5	24
83	DNA origami: The bridge from bottom to top. MRS Bulletin, 2017, 42, 943-950.	3.5	24
84	Antimicrobial Colloidal Silverâ€“Lignin Particles via Ion and Solvent Exchange. ACS Sustainable Chemistry and Engineering, 2019, 7, 15297-15303.	6.7	24
85	Lignin nanoparticles modified with tall oil fatty acid for cellulose functionalization. Cellulose, 2020, 27, 273-284.	4.9	24
86	Biomoleculeâ€Directed Carbon Nanotube Selfâ€Assembly. Advanced Healthcare Materials, 2021, 10, e2001162.	7.6	24
87	A Theranostic Cellulose Nanocrystalâ€Based Drug Delivery System with Enhanced Retention in Pulmonary Metastasis of Melanoma. Small, 2021, 17, e2007705.	10.0	24
88	Modular synthesis of self-assembling Janus-dendrimers and facile preparation of drug-loaded dendrimersomes. Nanoscale, 2017, 9, 7189-7198.	5.6	23
89	Increasing Complexity in Wireframe DNA Nanostructures. Molecules, 2020, 25, 1823.	3.8	23
90	Neonatal Fc receptor-targeted lignin-encapsulated porous silicon nanoparticles for enhanced cellular interactions and insulin permeation across the intestinal epithelium. Bioactive Materials, 2022, 9, 299-315.	15.6	23

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91	Phthalocyanineâ€“DNA origami complexes with enhanced stability and optical properties. Chemical Communications, 2020, 56, 7341-7344.	4.1	22
92	Stable neutral double hydrophilic block copolymer capillary coating for capillary electrophoretic separations. Electrophoresis, 2014, 35, 1106-1113.	2.4	20
93	Supramolecular Assembly and Coalescence of Ferritin Cages Driven by Designed Proteinâ€“Protein Interactions. Biomacromolecules, 2015, 16, 2006-2011.	5.4	20
94	Emergence of highly-ordered hierarchical nanoscale aggregates on electrostatic binding of self-assembled multivalent (SAMul) cationic micelles with polyanionic heparin. Journal of Materials Chemistry B, 2017, 5, 341-347.	5.8	20
95	Near-Infrared Chiral Plasmonic Microwires through Precision Assembly of Gold Nanorods on Soft Biotemplates. Journal of Physical Chemistry C, 2021, 125, 3256-3267.	3.1	20
96	Hydrogen bonding asymmetric star-shape derivative of bile acid leads to supramolecular fibrillar aggregates that wrap into micrometer spheres. Soft Matter, 2016, 12, 7159-7165.	2.7	19
97	Knoevenagel Condensation for Modifying the Reducing End Groups of Cellulose Nanocrystals. ACS Macro Letters, 2019, 8, 1642-1647.	4.8	19
98	From Precision Colloidal Hybrid Materials to Advanced Functional Assemblies. Accounts of Chemical Research, 2022, 55, 1785-1795.	15.6	19
99	Selfâ€Assembled Silver Nanoparticles in a Bowâ€Tie Antenna Configuration. Small, 2014, 10, 1057-1062.	10.0	18
100	Biotemplated Lithography of Inorganic Nanostructures (BLIN) for Versatile Patterning of Functional Materials. ACS Applied Nano Materials, 2021, 4, 529-538.	5.0	18
101	Engineered protein cages for selective heparin encapsulation. Journal of Materials Chemistry B, 2021, 9, 1272-1276.	5.8	17
102	Metallic Nanostructures Based on DNA Nanoshapes. Nanomaterials, 2016, 6, 146.	4.1	16
103	Serum Albuminâ€“Peptide Conjugates for Simultaneous Heparin Binding and Detection. ACS Omega, 2019, 4, 21891-21899.	3.5	16
104	Prospective Cancer Therapies Using Stimuliâ€Responsive DNA Nanostructures. Macromolecular Bioscience, 2021, 21, e2100272.	4.1	15
105	Hierarchically Ordered Supramolecular Protein-Polymer Composites with Thermoresponsive Properties. International Journal of Molecular Sciences, 2015, 16, 10201-10213.	4.1	14
106	Self-assembly of colloidal lignin particles in a continuous flow tubular reactor. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 587, 124228.	4.7	14
107	Challenges in Synthesis and Analysis of Asymmetrically Grafted Cellulose Nanocrystals via Atom Transfer Radical Polymerization. Biomacromolecules, 2021, 22, 2702-2717.	5.4	14
108	Diblockâ€Copolymerâ€Mediated Selfâ€Assembly of Proteinâ€Stabilized Iron Oxide Nanoparticle Clusters for Magnetic Resonance Imaging. Chemistry - A European Journal, 2014, 20, 2718-2722.	3.3	13

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109	Controlling the Formation of DNA Origami Structures with External Signals. Small, 2012, 8, 2016-2020.	10.0	12
110	Multimodality labeling strategies for the investigation of nanocrystalline cellulose biodistribution in a mouse model of breast cancer. Nuclear Medicine and Biology, 2020, 80-81, 1-12.	0.6	12
111	Cationic cellulose nanocrystals for fast, efficient and selective heparin recovery. Chemical Engineering Journal, 2021, 420, 129811.	12.7	12
112	Scaling Up Production of Colloidal Lignin Particles - OPEN ACCESS. Nordic Pulp and Paper Research Journal, 2017, 32, 586-596.	0.7	12
113	Simultaneous Organic and Inorganic Hostâ€Guest Chemistry within Pillarareneâ€Protein Cage Frameworks. Chemistry - A European Journal, 2022, 28, .	3.3	12
114	DNA origami structures as calibration standards for nanometrology. Measurement Science and Technology, 2017, 28, 034001.	2.6	11
115	High-Generation Amphiphilic Janus-Dendrimers as Stabilizing Agents for Drug Suspensions. Biomacromolecules, 2018, 19, 3983-3993.	5.4	11
116	Halogenâ€Bondâ€Mediated Selfâ€Assembly of Polymerâ€“Resorcinarene Complexes. Macromolecular Rapid Communications, 2019, 40, 1900158.	3.9	11
117	Partial-filling affinity capillary electrophoresis and quartz crystal microbalance with adsorption energy distribution calculations in the study of biomolecular interactions with apolipoprotein E as interaction partner. Analytical and Bioanalytical Chemistry, 2014, 406, 4137-4146.	3.7	10
118	De novo nanomaterial crystals from DNA frameworks. Nature Materials, 2020, 19, 706-707.	27.5	10
119	Aptamer-embedded DNA origami cage for detecting (glycated) hemoglobin with a surface plasmon resonance sensor. Materials Letters, 2020, 275, 128141.	2.6	8
120	Rapid Cationization of Gold Nanoparticles by Twoâ€Step Phase Transfer. Angewandte Chemie, 2015, 127, 8101-8104.	2.0	7
121	Proteinâ€“dendron conjugates for DNA binding: understanding the effect of the protein core on multivalency. RSC Advances, 2011, 1, 1677.	3.6	6
122	Polyelectrolyte Encapsulation and Confinement within Protein Cage-Inspired Nanocompartments. Pharmaceutics, 2021, 13, 1551.	4.5	6
123	A Janus-Type Phthalocyanine for the Assembly of Photoactive DNA Origami Coatings. Bioconjugate Chemistry, 2021, 32, 1123-1129.	3.6	5
124	Contents: (Small 6/2014). Small, 2014, 10, 1031-1037.	10.0	4
125	Engineering of the Function of Diamond-like Carbon Binding Peptides through Structural Design. Biomacromolecules, 2015, 16, 476-482.	5.4	4
126	Packaging DNA Origami into Viral Protein Cages. Methods in Molecular Biology, 2018, 1776, 267-277.	0.9	4

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127	Thermally Induced Reversible Selfâ€Assembly of Apoferritinâ€“Block Copolymer Complexes. Macromolecular Rapid Communications, 2019, 40, 1900308.	3.9	4
128	Lyotropic liquid crystals and linear supramolecular polymers of end-functionalized oligosaccharides. Chemical Communications, 2019, 55, 11739-11742.	4.1	4
129	Solâ€Gel Synthesis of Mesoporous Silica Using a Protein Crystal Template. ChemNanoMat, 2022, 8, .	2.8	4
130	A Synthetic Protocellâ€Based Heparin Scavenger. Small, 2023, 19, e2201790.	10.0	4
131	Hybrid Nanoassemblies from Viruses and DNA Nanostructures. Nanomaterials, 2021, 11, 1413.	4.1	3
132	DNA Nanotechnology: Evolution of Structural DNA Nanotechnology (Adv. Mater. 24/2018). Advanced Materials, 2018, 30, 1870175.	21.0	2
133	DNA Origami-Mediated Substrate Nanopatterning of Inorganic Structures for Sensing Applications. Journal of Visualized Experiments, 2019, , .	0.3	2
134	Chemische Modifizierung der reduzierenden Enden von Cellulosenanokristallen. Angewandte Chemie, 2021, 133, 66-88.	2.0	2
135	Electrostatic Self-Assembly of Protein Cage Arrays. Methods in Molecular Biology, 2021, 2208, 123-133.	0.9	2
136	DNAâ€Origamiâ€Templated Growth of Multilamellar Lipid Assemblies. Angewandte Chemie, 2021, 133, 840-846.	2.0	1
137	Host-Guest Complex for Heparin Binding and Sensing. ECS Meeting Abstracts, 2021, MA2021-01, 1665-1665.	0.0	0
138	Frontispiece: Scaling Up DNA Origami Lattice Assembly. Chemistry - A European Journal, 2021, 27, .	3.3	0