

Tao Zhou

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	High-Performance Reversible Aqueous Zn-Ion Battery Based on Porous MnO _x Nanorods Coated by MOF-Derived N-Doped Carbon. <i>Advanced Energy Materials</i> , 2018, 8, 1801445.	19.5	430
2	Ultrabust Ti ₃ C ₂ MXene-Based Soft Actuators via Bamboo-Inspired Mesoscale Assembly of Hybrid Nanostructures. <i>ACS Nano</i> , 2020, 14, 7055-7065.	14.6	199
3	Hierarchically Structured Self-Healing Sensors with Tunable Positive/Negative Piezoresistivity. <i>Advanced Functional Materials</i> , 2018, 28, 1706658.	14.9	181
4	Balancing the mechanical, electronic, and self-healing properties in conductive self-healing hydrogel for wearable sensor applications. <i>Materials Horizons</i> , 2021, 8, 1795-1804.	12.2	176
5	Protein-Inspired Self-Healable Ti ₃ C ₂ MXenes/Rubber-Based Supramolecular Elastomer for Intelligent Sensing. <i>ACS Nano</i> , 2020, 14, 2788-2797.	14.6	156
6	A cephalopod-inspired mechanoluminescence material with skin-like self-healing and sensing properties. <i>Materials Horizons</i> , 2019, 6, 996-1004.	12.2	145
7	Arbitrarily 3D Configurable Hygroscopic Robots with a Covalent-Noncovalent Interpenetrating Network and Self-Healing Ability. <i>Advanced Materials</i> , 2019, 31, e1900042.	21.0	136
8	A Polymetallic Metal-Organic Framework-Derived Strategy toward Synergistically Multidoped Metal Oxide Electrodes with Ultralong Cycle Life and High Volumetric Capacity. <i>Advanced Functional Materials</i> , 2017, 27, 1605332.	14.9	116
9	Molecular Chain Movements and Transitions of SEBS above Room Temperature Studied by Moving-Window Two-Dimensional Correlation Infrared Spectroscopy. <i>Macromolecules</i> , 2007, 40, 9009-9017.	4.8	95
10	Human-tissue-inspired anti-fatigue-fracture hydrogel for a sensitive wide-range human-machine interface. <i>Journal of Materials Chemistry A</i> , 2020, 8, 2074-2082.	10.3	94
11	Recent Developments of Planar Micro-Supercapacitors: Fabrication, Properties, and Applications. <i>Advanced Functional Materials</i> , 2020, 30, 1910000.	14.9	86
12	Poly(vinyl alcohol)/graphene oxide nanocomposites prepared by in situ polymerization with enhanced mechanical properties and water vapor barrier properties. <i>RSC Advances</i> , 2016, 6, 49448-49458.	3.6	66
13	Understanding the crystallization behavior of polyamide 6/polyamide 66 alloys from the perspective of hydrogen bonds: projection moving-window 2D correlation FTIR spectroscopy and the enthalpy. <i>RSC Advances</i> , 2016, 6, 87405-87415.	3.6	65
14	New understanding on the reaction pathways of the polyacrylonitrile copolymer fiber pre-oxidation: online tracking by two-dimensional correlation FTIR spectroscopy. <i>RSC Advances</i> , 2016, 6, 4397-4409.	3.6	62
15	Selective Metallization Induced by Laser Activation: Fabricating Metallized Patterns on Polymer via Metal Oxide Composite. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 8996-9005.	8.0	61
16	Fabricating Metallic Circuit Patterns on Polymer Substrates through Laser and Selective Metallization. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 33999-34007.	8.0	59
17	Hydrogen bond breaking of TPU upon heating: understanding from the viewpoints of molecular movements and enthalpy. <i>RSC Advances</i> , 2015, 5, 31153-31165.	3.6	50
18	Laser-Induced Selective Metallization on Polymer Substrates Using Organocopper for Portable Electronics. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 13714-13723.	8.0	50

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19	Soft yet Tough: a Mechanically and Functionally Tissue-like Organohydrogel for Sensitive Soft Electronics. <i>Chemistry of Materials</i> , 2022, 34, 1392-1402.	6.7	50
20	Synthesis of a Waterborne Polyurethane-Fluorinated Emulsion and Its Hydrophobic Properties of Coating Films. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 19257-19264.	3.7	48
21	Graphene oxide interpenetrated polymeric composite hydrogels as highly effective adsorbents for water treatment. <i>RSC Advances</i> , 2014, 4, 42346-42357.	3.6	48
22	Recognition ability of temperature responsive molecularly imprinted polymer hydrogels. <i>Soft Matter</i> , 2011, 7, 1986.	2.7	45
23	Achieving ultralong life sodium storage in amorphous cobalt-tin binary sulfide nanoboxes sheathed in N-doped carbon. <i>Journal of Materials Chemistry A</i> , 2017, 5, 10398-10405.	10.3	45
24	A Simple Way to Achieve Legible and Local Controllable Patterning for Polymers Based on a Near-Infrared Pulsed Laser. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 1977-1983.	8.0	43
25	Ultrarobust Photothermal Materials via Dynamic Crosslinking for Solar Harvesting. <i>Small</i> , 2022, 18, e2104048.	10.0	43
26	Cross-linking process of cis-polybutadiene rubber with peroxides studied by two-dimensional infrared correlation spectroscopy: a detailed tracking. <i>RSC Advances</i> , 2015, 5, 10231-10242.	3.6	40
27	Polybenzoxazines: Thermal Responsiveness of Hydrogen Bonds and Application as Latent Curing Agents for Thermosetting Resins. <i>ACS Omega</i> , 2017, 2, 1529-1534.	3.5	40
28	Large-area mechanical interlocking via nanopores: Ultra-high-strength direct bonding of polymer and metal materials. <i>Applied Surface Science</i> , 2019, 492, 558-570.	6.1	38
29	Hydrogen bonding in micro-phase separation of poly(polyamide 12-block-polytetrahydrofuran) alternating block copolymer: Enthalpies and molecular movements. <i>Vibrational Spectroscopy</i> , 2016, 86, 160-172.	2.2	36
30	Local Controllable Laser Patterning of Polymers Induced by Graphene Material. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 28077-28085.	8.0	36
31	Micro-dynamics mechanism of the phase transition behavior of poly(N-isopropylacrylamide-co-2-hydroxyethyl methacrylate) hydrogels revealed by two-dimensional correlation spectroscopy. <i>Polymer Chemistry</i> , 2017, 8, 865-878.	3.9	34
32	Two-step volume phase transition mechanism of poly(N-vinylcaprolactam) hydrogel online-tracked by two-dimensional correlation spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 27221-27232.	2.8	34
33	Enhanced local controllable laser patterning of polymers induced by graphene/polystyrene composites. <i>Materials and Design</i> , 2018, 141, 159-169.	7.0	34
34	Strong, Healable, Stimulus-Responsive Fluorescent Elastomers Based on Assembled Borate Dynamic Nanostructures. <i>Small</i> , 2022, 18, e2107164.	10.0	34
35	Moving-window two-dimensional correlation infrared spectroscopic study on the dissolution process of poly(vinyl alcohol). <i>Analytical and Bioanalytical Chemistry</i> , 2015, 407, 8765-8771.	3.7	27
36	Microdynamics mechanism of D ₂ O absorption of the poly(2-hydroxyethyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 67 Td (me spectroscopy. <i>Soft Matter</i> , 2016, 12, 1145-1157.	2.7	27

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37	Long life rechargeable Li-O ₂ batteries enabled by enhanced charge transfer in nanocable-like Fe@N-doped carbon nanotube catalyt. <i>Science China Materials</i> , 2017, 60, 415-426.	6.3	26
38	Ultraviolet photodetector on flexible polymer substrate based on nano zinc oxide and laser-induced selective metallization. <i>Composites Science and Technology</i> , 2020, 190, 108045.	7.8	24
39	An Efficient Strategy to Prepare Ultra-High Sensitivity SERS-Active Substrate Based on Laser-Induced Selective Metallization of Polymers. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 5038-5049.	6.7	24
40	Exposing Metal Oxide with Intrinsic Catalytic Activity by Near-Infrared Pulsed Laser: Laser-Induced Selective Metallization on Polymer Materials. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700937.	3.7	21
41	Synergistic effect of stereocomplex crystals and shear flow on the crystallization rate of poly(L-lactic acid): A rheological study. <i>RSC Advances</i> , 2014, 4, 2733-2742.	3.6	20
42	An insight into the sequential order in 2D correlation spectroscopy using polymer transitions: Boltzmann Sigmoid, Gaussian Cumulative, Lorentz Cumulative, and Asymmetric Sigmoid. Findings in experiments and simulations. <i>Vibrational Spectroscopy</i> , 2014, 70, 137-161.	2.2	19
43	Locally Controllable Surface Foaming of Polymers Induced by Graphene via Near-Infrared Pulsed Laser. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 2498-2511.	6.7	19
44	Identification of weak transitions using moving-window two-dimensional correlation analysis: treatment with scaling techniques. <i>Analytical and Bioanalytical Chemistry</i> , 2014, 406, 4157-4172.	3.7	18
45	Fabrication of Copper Patterns on Polydimethylsiloxane through Laser-Induced Selective Metallization. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 8821-8828.	3.7	18
46	Polypropylene elastomer composite for the all-vanadium redox flow battery: current collector materials. <i>Journal of Materials Chemistry A</i> , 2015, 3, 2387-2398.	10.3	16
47	Online tracking of the thermal reduction of graphene oxide by two-dimensional correlation infrared spectroscopy. <i>Vibrational Spectroscopy</i> , 2018, 96, 32-45.	2.2	16
48	Direct Bonding of Polymer and Metal with an Ultrahigh Strength: Laser Treatment and Mechanical Interlocking. <i>Advanced Engineering Materials</i> , 2021, 23, 2001288.	3.5	16
49	Polymer-Metal Hybrid Material with an Ultra-High Interface Strength Based on Mechanical Interlocking via Nanopores Produced by Electrochemistry. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 12409-12420.	3.7	15
50	Separation of the molecular motion from different components or phases using projection moving-window 2D correlation FTIR spectroscopy for multiphase and multicomponent polymers. <i>RSC Advances</i> , 2015, 5, 14832-14842.	3.6	13
51	New Strategy to Achieve Laser Direct Writing of Polymers: Fabrication of the Color-Changing Microcapsule with a Core-Shell Structure. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 41688-41700.	8.0	13
52	Scalable Strategy to Directly Prepare 2D and 3D Liquid Metal Circuits Based on Laser-Induced Selective Metallization. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 20000-20013.	8.0	13
53	Investigation of selective molecular interactions using two-dimensional Fourier transform IR spectroscopy. <i>Analytical and Bioanalytical Chemistry</i> , 2010, 397, 339-343.	3.7	12
54	A method to construct perfect 3D polymer/graphene oxide core-shell microspheres via electrostatic self-assembly. <i>RSC Advances</i> , 2015, 5, 32469-32478.	3.6	12

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55	Difference in the micro-dynamics mechanism between aromatic nylon and aliphatic nylon during water absorption: spectroscopic evidence. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 26764-26776.	2.8	12
56	Laser-assisted mask-free patterning strategy for high-performance hybrid micro-supercapacitors with 3D current collectors. <i>Chemical Engineering Journal</i> , 2022, 437, 135493.	12.7	12
57	Crystallization behavior and toughening mechanism of poly(ethylene oxide) in polyoxymethylene/poly(ethylene oxide) crystalline/crystalline blends. <i>Polymers for Advanced Technologies</i> , 2014, 25, 760-768.	3.2	11
58	Generation Mechanism of Oxidation Products during the Air Atmosphere Oxidation of SEBS/PP Blends: Tracked by 2D Correlation Infrared Spectroscopy. <i>Macromolecular Chemistry and Physics</i> , 2016, 217, 2501-2516.	2.2	11
59	Characterization and Properties of Thermoplastic Polyether Elastomer/Polyoxymethylene Blends Prepared by Melt-Mixing Method. <i>Polymer Science - Series A</i> , 2019, 61, 890-896.	1.0	11
60	Laser Direct Writing of Flexible Heaters on Polymer Substrates. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 11161-11170.	3.7	11
61	Effect of alkyl side chain length on the properties of polyetherimides from molecular simulation combined with experimental results. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2010, 48, 595-599.	2.1	10
62	Two-dimensional correlation infrared spectroscopy reveals the detailed molecular movements during the crystallization of poly(ethylene-co-vinyl alcohol). <i>RSC Advances</i> , 2015, 5, 84729-84745.	3.6	10
63	Exploration of the unusual two-step volume phase transition of the poly(<i>N</i> -vinylcaprolactam-co-hydroxyethyl methacrylate) hydrogel. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 23013-23024.	2.8	10
64	Structure, properties, and mechanism of reactive compatibilization of epoxy to polyphenylene sulfide/polyamide elastomer. <i>Journal of Applied Polymer Science</i> , 2013, 130, 3411-3420.	2.6	9
65	Ultra-foldable integrated high-performance in-plane micro-supercapacitors from laser-induced selective metallization. <i>Energy Storage Materials</i> , 2022, 51, 139-148.	18.0	8
66	Formation of a large-scale shish-kebab structure of polyoxymethylene in the melt spinning and the crystalline morphology evolution after hot stretching. <i>Polymers for Advanced Technologies</i> , 2015, 26, 77-84.	3.2	7
67	Polyoxymethylene/thermoplastic polyamide elastomer blends: Morphology, crystallization, mechanical, and antistatic properties. <i>High Performance Polymers</i> , 2021, 33, 969-977.	1.8	7
68	Lamellar cluster structure formation resulting from interchain interaction in a novel aromatic polyimide based on PMDA monomer. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2010, 48, 2257-2261.	2.1	6
69	Top-Down Direct Preparation of Orange-Yellow Dye Similar to Psittacofulvins from Commercial Polymer by Laser Writing. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 58339-58348.	8.0	6
70	Characterizations and Properties of POM Toughened by Thermoplastic Polyamide Elastomer. <i>Polymer Science - Series A</i> , 2021, 63, 275-282.	1.0	6
71	Efficient and Simple Fabrication of High-Strength and High-Conductivity Metallization Patterns on Flexible Polymer Films. <i>Industrial & Engineering Chemistry Research</i> , 2022, 61, 6987-6996.	3.7	6
72	Autocatalytic Laser Activator for Both UV and NIR Lasers: Preparation of Circuits on Polymer Substrates by Selective Metallization. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 31411-31423.	8.0	6

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73	Crystallization Behavior of Poly(Tetramethylene Oxide) Influenced by the Crystallization Condition of Poly(Butylene Succinate) in Their Copolymers. Journal Wuhan University of Technology, Materials Science Edition, 2019, 34, 496-506.	1.0	5
74	Design and preparation of rapid full bio-degradable plastic composites based on poly(butylene) Tj ETQq0 0 0 rgBT/Overlock 10 Tf 50 7	4.6	4
75	Ultra-Stretchable and Self-Healing Anti-Freezing Strain Sensors Based on Hydrophobic Associated Polyacrylic Acid Hydrogels. Materials, 2021, 14, 6165.	2.9	4
76	Pitaya-Structured Microspheres with Dual Laser Wavelength Responses for Polymer Laser Direct Writing. ACS Applied Materials & Interfaces, 2022, 14, 14817-14833.	8.0	4
77	Preliminary study of experimental parameters for projection moving-window two-dimensional correlation FTIR spectroscopy. Journal of Molecular Structure, 2019, 1176, 777-790.	3.6	3
78	Functional building devices using laser-induced selective metallization on magnesium oxychloride cement composites. Cement and Concrete Composites, 2022, 128, 104423.	10.7	3
79	Rewritable Polymer Materials for Ultraviolet Laser Based on Photochromic Microcapsules. Industrial & Engineering Chemistry Research, 2022, 61, 5833-5842.	3.7	3
80	Composition dependence of the thermal behavior, morphology and properties of biodegradable PBS/PTMO segment block copolymer. Journal Wuhan University of Technology, Materials Science Edition, 2016, 31, 219-226.	1.0	2
81	Influence of processing conditions on mechanical properties of blends of styrenic block copolymer and poly(phenylene oxide): Miscibility and microdomain size. Journal of Applied Polymer Science, 2018, 135, 46123.	2.6	2
82	Preparation and Characterization of Polyoxymethylene/Thermoplastic Polyamide Elastomer Blends Compatibilized by Maleic Anhydride Grafted ABS Copolymer. Polymer Science - Series A, 2021, 63, 420-428.	1.0	2
83	A conductive foam: Based on novel poly(styrene- <i>b</i> -butadiene- <i>c</i> -styrene- <i>b</i> -styrene) _{2.6} tri-block copolymer filled by carbon black. Journal of Applied Polymer Science, 2015, 132, .	2.6	1
84	Achieving Rewritable Fluorescent Patterning on Dye-Doped Polymers Using Programmable Laser Direct Writing. Industrial & Engineering Chemistry Research, 2022, 61, 6468-6480.	3.7	1
85	Reactive Compatibilization of Multi-Hydroxy Functional Compound Based on Polyoxymethylene/Thermoplastic Polyether Elastomer Blends. Polymer Science - Series B, 2020, 62, 724-733.	0.8	0