

Robert Gajstl

List of Publications by Year in descending order

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Version: 2024-02-01

70
papers

2,738
citations

186265

28
h-index

189892

50
g-index

76
all docs

76
docs citations

76
times ranked

2561
citing authors

#	ARTICLE	IF	CITATIONS
1	Remote-controlling chemical reactions by light: Towards chemistry with high spatio-temporal resolution. <i>Chemical Society Reviews</i> , 2014, 43, 1982.	38.1	309
2	π-extended anthracenes as sensitive probes for mechanical stress. <i>Chemical Science</i> , 2016, 7, 370-375.	7.4	192
3	Mechanochemical bond scission for the activation of drugs. <i>Nature Chemistry</i> , 2021, 13, 131-139.	13.6	152
4	Switching Diarylethenes Reliably in Both Directions with Visible Light. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 1208-1212.	13.8	128
5	Stress-induced colouration and crosslinking of polymeric materials by mechanochemical formation of triphenylimidazolyl radicals. <i>Chemical Communications</i> , 2016, 52, 8608-8611.	4.1	123
6	Ultra-strong bio-glue from genetically engineered polypeptides. <i>Nature Communications</i> , 2021, 12, 3613.	12.8	104
7	Fabrication and Mechanical Properties of Engineered Protein-Based Adhesives and Fibers. <i>Advanced Materials</i> , 2020, 32, e1906360.	21.0	97
8	Conditional repair by locally switching the thermal healing capability of dynamic covalent polymers with light. <i>Nature Communications</i> , 2016, 7, 13623.	12.8	87
9	DNA-surfactant complexes: self-assembly properties and applications. <i>Chemical Society Reviews</i> , 2017, 46, 5147-5172.	38.1	80
10	Polymer mechanochemistry-enabled pericyclic reactions. <i>Polymer Chemistry</i> , 2020, 11, 2274-2299.	3.9	75
11	Controlling Covalent Connection and Disconnection with Light. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 8784-8787.	13.8	73
12	Toward Drug Release Using Polymer Mechanochemical Disulfide Scission. <i>Journal of the American Chemical Society</i> , 2020, 142, 14725-14732.	13.7	72
13	Methods for Exerting and Sensing Force in Polymer Materials Using Mechanophores. <i>ChemPlusChem</i> , 2020, 85, 1095-1103.	2.8	72
14	Anti-Stokes Stress Sensing: Mechanochemical Activation of Triplet-Triplet Annihilation Photon Upconversion. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 12919-12923.	13.8	68
15	Mechanochemical activation of disulfide-based multifunctional polymers for theranostic drug release. <i>Chemical Science</i> , 2021, 12, 1668-1674.	7.4	61
16	Engineered Near-Infrared Fluorescent Protein Assemblies for Robust Bioimaging and Therapeutic Applications. <i>Advanced Materials</i> , 2020, 32, e2000964.	21.0	58
17	Sterically Crowding the Bridge of Dithienylcyclopentenes for Enhanced Photoswitching Performance. <i>Chemistry - A European Journal</i> , 2012, 18, 14282-14285.	3.3	52
18	Promoting Mechanochemistry of Covalent Bonds by Noncovalent Micellar Aggregation. <i>ACS Macro Letters</i> , 2016, 5, 995-998.	4.8	47

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19	Multicolor Mechanofluorophores for the Quantitative Detection of Covalent Bond Scission in Polymers. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 13287-13293.	13.8	43
20	Mechanochemical Release of Non-Covalently Bound Guests from a Polymer-Decorated Supramolecular Cage. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 13626-13630.	13.8	39
21	Fractography of poly(<i>N</i> -isopropylacrylamide) hydrogel networks crosslinked with mechanofluorophores using confocal laser scanning microscopy. <i>Polymer Chemistry</i> , 2020, 11, 358-366.	3.9	38
22	Photoreversible Prodrugs and Protags: Switching the Release of Maleimides by Using Light under Physiological Conditions. <i>Chemistry - A European Journal</i> , 2015, 21, 4422-4427.	3.3	36
23	Quantifying Rate- and Temperature-Dependent Molecular Damage in Elastomer Fracture. <i>Physical Review X</i> , 2020, 10, .	8.9	35
24	Activation of the Catalytic Activity of Thrombin for Fibrin Formation by Ultrasound. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 14707-14714.	13.8	35
25	Tailoring the Properties of Optical Force Probes for Polymer Mechanochemistry. <i>Chemistry - A European Journal</i> , 2021, 27, 15889-15897.	3.3	35
26	Release of Molecular Cargo from Polymer Systems by Mechanochemistry. <i>Chemistry - A European Journal</i> , 2022, 28, .	3.3	35
27	Nematic DNA Thermotropic Liquid Crystals with Photoresponsive Mechanical Properties. <i>Small</i> , 2017, 13, 1701207.	10.0	32
28	Liquefaction of Biopolymers: Solvent-free Liquids and Liquid Crystals from Nucleic Acids and Proteins. <i>Accounts of Chemical Research</i> , 2017, 50, 1212-1221.	15.6	31
29	Controlling Optical and Catalytic Activity of Genetically Engineered Proteins by Ultrasound. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 1493-1497.	13.8	31
30	Mimicking Active Biopolymer Networks with a Synthetic Hydrogel. <i>Journal of the American Chemical Society</i> , 2019, 141, 1989-1997.	13.7	30
31	The Mechanochemical Synthesis and Activation of Carbon-Rich-Conjugated Materials. <i>Advanced Science</i> , 2022, 9, e2105497.	11.2	28
32	Going with the Flow: Tunable Flow-Induced Polymer Mechanochemistry. <i>Advanced Functional Materials</i> , 2020, 30, 2002372.	14.9	26
33	Reversibly Photo-Modulating Mechanical Stiffness and Toughness of Bioengineered Protein Fibers. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 3222-3228.	13.8	25
34	Exploring the Conformational Space of Bridge-Substituted Dithienylcyclopentenes. <i>Chemistry - A European Journal</i> , 2015, 21, 14545-14554.	3.3	24
35	Shear-Induced Structural and Functional Transformations of Poly(<i>N</i> -vinylcaprolactam) Microgels. <i>ACS Applied Polymer Materials</i> , 2020, 2, 1682-1691.	4.4	23
36	The Mechanochemical Release of Naphthalimide Fluorophores from $\hat{1}^2$ -Carbonate and $\hat{1}^2$ -Carbamate Disulfide-Centered Polymers. <i>CCS Chemistry</i> , 2021, 3, 2333-2344.	7.8	23

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37	Microgels react to force: mechanical properties, syntheses, and force-activated functions. <i>Chemical Society Reviews</i> , 2022, 51, 2939-2956.	38.1	23
38	Zuverlässiges Schalten von Diarylethenen in beide Richtungen mithilfe von sichtbarem Licht. <i>Angewandte Chemie</i> , 2016, 128, 1226-1230.	2.0	20
39	Mechano- ϵ -Nanoswitches for Ultrasound- ϵ Controlled Drug Activation. <i>Advanced Science</i> , 2022, 9, e2104696.	11.2	20
40	Highly Stiff and Stretchable DNA Liquid Crystalline Organogels with Super Plasticity, Ultrafast Self-Healing, and Magnetic Response Behaviors. <i>Advanced Materials</i> , 2022, 34, e2106208.	21.0	19
41	Microgels as drug carriers for sonopharmacology. <i>Journal of Polymer Science</i> , 2022, 60, 1864-1870.	3.8	18
42	Optical Sensing of Stress in Polymers. <i>RSC Polymer Chemistry Series</i> , 2017, , 53-75.	0.2	15
43	Mechanically Resistant Poly(<i>N</i> -vinylcaprolactam) Microgels with Sacrificial Supramolecular Catechin Hydrogen Bonds. <i>Advanced Science</i> , 2022, 9, e2104004.	11.2	15
44	Force ahead: Emerging Applications and Opportunities of Polymer Mechanochemistry. <i>ACS Polymers Au</i> , 2022, 2, 208-212.	4.1	15
45	Transformations of polycyclic musks AHTN and HHCB upon disinfection with hypochlorite: two new chlorinated disinfection by-products (CDBP) of AHTN and a possible source for HHCB-lactone. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 399, 3579-3588.	3.7	14
46	Fast, Efficient, and Targeted Liposome Delivery Mediated by DNA Hybridization. <i>Advanced Healthcare Materials</i> , 2019, 8, e1900389.	7.6	14
47	Reversible regulation of metallo-base-pair interactions for DNA dehybridization by ultrasound. <i>Chemical Communications</i> , 2021, 57, 7438-7440.	4.1	12
48	Tailoring the Properties of Optical Force Probes for Polymer Mechanochemistry. <i>Chemistry - A European Journal</i> , 2021, 27, 15827-15828.	3.3	12
49	Activation of Antibiotic-Grafted Polymer Brushes by Ultrasound. <i>ACS Macro Letters</i> , 2022, 11, 15-19.	4.8	12
50	Anti-Stokes-Belastungsanzeige: Mechanochemische Aktivierung der Triplett-Triplett-Annihilierung-Photonen-Hochkonversion. <i>Angewandte Chemie</i> , 2019, 131, 13051-13055.	2.0	10
51	Mechanochemische Freisetzung nichtkovalent gebundener Gäste aus einem mit Polymerketten dekorierten supramolekularen Käfig. <i>Angewandte Chemie</i> , 2021, 133, 13738-13742.	2.0	9
52	Reversibly Photo-Modulating Mechanical Stiffness and Toughness of Bioengineered Protein Fibers. <i>Angewandte Chemie</i> , 2021, 133, 3259-3265.	2.0	8
53	Gated Photoreactivity of Pyrene Copolymers in Multiresponsive Cross-Linked starPEG-Hydrogels. <i>ACS Polymers Au</i> , 2021, 1, 59-66.	4.1	8
54	Confocal Microscopy Visualizes Particle-Crack Interactions in Epoxy Composites with Optical Force Probe-Cross-Linked Rubber Particles. <i>Macromolecules</i> , 2022, 55, 1060-1066.	4.8	8

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55	Mehrfarbige Mechanofluorophore für die quantitative Anzeige kovalenter Bindungsbrüche in Polymeren. <i>Angewandte Chemie</i> , 2021, 133, 13398-13404.	2.0	7
56	Kontrolle über die optische und katalytische Aktivität gentechnisch hergestellter Proteine mit Ultraschall. <i>Angewandte Chemie</i> , 2021, 133, 1515-1519.	2.0	6
57	Reversible Laser Threshold Modulation in Dithienylethene Conjugated Polymer Blends: A Concept for <i>q</i> -Switching in Organic DFB Lasers. <i>ACS Photonics</i> , 2019, 6, 558-564.	6.6	5
58	DNA hybridization as a general method to enhance the cellular uptake of nanostructures. <i>Nanoscale</i> , 2020, 12, 21299-21305.	5.6	5
59	3,5,5,6,8,8-Hexamethyl-5,6,7,8-tetrahydro-2-naphthoic acid (AHTN-COOH). <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2010, 66, o2687-o2687.	0.2	5
60	A Fluorescent Micro-Optofluidic Sensor for In-Line Ion Selective Electrolyte Monitoring. <i>IEEE Sensors Journal</i> , 2018, 18, 3946-3951.	4.7	4
61	Triazole-Extended Anthracenes as Optical Force Probes. <i>Synlett</i> , 2022, 33, 875-878.	1.8	4
62	Methods for Exerting and Sensing Force in Polymer Materials Using Mechanophores. <i>ChemPlusChem</i> , 2020, 85, 1092-1092.	2.8	3
63	Polymer Mechanochemistry: Going with the Flow: Tunable Flow-Induced Polymer Mechanochemistry (<i>Adv. Funct. Mater.</i> 27/2020). <i>Advanced Functional Materials</i> , 2020, 30, 2070180.	14.9	2
64	Aktivierung der katalytischen Aktivität von Thrombin für die Bildung von Fibrin durch Ultraschall. <i>Angewandte Chemie</i> , 2021, 133, 14829-14836.	2.0	1
65	Frontispiece: Tailoring the Properties of Optical Force Probes for Polymer Mechanochemistry. <i>Chemistry - A European Journal</i> , 2021, 27, .	3.3	1
66	Light-Gated Chemical Reactions and Catalytic Processes. , 2016, , 167-193.		0
67	Mit molekularen Photoschaltern Materialien kontrollieren. <i>Nachrichten Aus Der Chemie</i> , 2017, 65, 525-529.	0.0	0
68	Innentitelbild: Mechanochemische Freisetzung nichtkovalent gebundener Gäste aus einem mit Polymerketten dekorierten supramolekularen Käfig (<i>Angew. Chem.</i> 24/2021). <i>Angewandte Chemie</i> , 2021, 133, 13226-13226.	2.0	0
69	Machen, zerstören, besser machen. <i>Nachrichten Aus Der Chemie</i> , 2021, 69, 78-79.	0.0	0
70	Frontispiece: Release of Molecular Cargo from Polymer Systems by Mechanochemistry. <i>Chemistry - A European Journal</i> , 2022, 28, .	3.3	0