Joost Brancart

List of Publications by Year
in descending order

40 papers	1,691 citations	331538 21 h-index	330025 37 g-index
41 all docs	41 docs citations	41 times ranked	1428 citing authors

#	Article	IF	Citations
1	Self-healing soft pneumatic robots. Science Robotics, 2017, 2, .	9.9	359
2	A review on self-healing polymers for soft robotics. Materials Today, 2021, 47, 187-205.	8.3	150
3	A self-healing polymer network based on reversible covalent bonding. Reactive and Functional Polymers, 2013, 73, 413-420.	2.0	137
4	Mechanical, physical and chemical characterisation of mycelium-based composites with different types of lignocellulosic substrates. PLoS ONE, 2019, 14, e0213954.	1.1	119
5	Processing of Selfâ€Healing Polymers for Soft Robotics. Advanced Materials, 2022, 34, e2104798.	11.1	80
6	The influence of stereochemistry on the reactivity of the Dielsâ€"Alder cycloaddition and the implications for reversible network polymerization. Polymer Chemistry, 2019, 10, 473-485.	1.9	61
7	Anthracene-Based Thiolâ€"Ene Networks with Thermo-Degradable and Photo-Reversible Properties. Macromolecules, 2017, 50, 1930-1938.	2.2	59
8	Self-healing property characterization of reversible thermoset coatings. Journal of Thermal Analysis and Calorimetry, 2011, 105, 805-809.	2.0	58
9	Additive Manufacturing for Self-Healing Soft Robots. Soft Robotics, 2020, 7, 711-723.	4.6	54
10	One-component Dielsâ€"Alder based polyurethanes: a unique way to self-heal. RSC Advances, 2017, 7, 48047-48053.	1.7	47
11	A Pneumatic Artificial Muscle Manufactured Out of Self-Healing Polymers That Can Repair Macroscopic Damages. IEEE Robotics and Automation Letters, 2018, 3, 16-21.	3.3	39
12	Development of a self-healing soft pneumatic actuator: a first concept. Bioinspiration and Biomimetics, 2015, 10, 046007.	1.5	38
13	Room-temperature versus heating-mediated healing of a Diels-Alder crosslinked polymer network. Polymer, 2018, 153, 453-463.	1.8	37
14	Roadmap on soft robotics: multifunctionality, adaptability and growth without borders. Multifunctional Materials, 2022, 5, 032001.	2.4	37
15	Atomic force microscopyâ€"based study of self-healing coatings based on reversible polymer network systems. Journal of Intelligent Material Systems and Structures, 2014, 25, 40-46.	1.4	36
16	Self-Healing and High Interfacial Strength in Multi-Material Soft Pneumatic Robots via Reversible Dielsâ€"Alder Bonds. Actuators, 2020, 9, 34.	1.2	35
17	Room Temperature Self-Healing in Soft Pneumatic Robotics: Autonomous Self-Healing in a Diels-Alder Polymer Network. IEEE Robotics and Automation Magazine, 2020, 27, 44-55.	2.2	32
18	An Inside Perspective on Magma Intrusion: Quantifying 3D Displacement and Strain in Laboratory Experiments by Dynamic X-Ray Computed Tomography. Frontiers in Earth Science, 2019, 7, .	0.8	29

#	Article	IF	Citations
19	Diffusion- and Mobility-Controlled Self-Healing Polymer Networks with Dynamic Covalent Bonding. Macromolecules, 2019, 52, 8440-8452.	2.2	25
20	A novel approach for the closure of large damage in self-healing elastomers using magnetic particles. Polymer, 2020, 204, 122819.	1.8	25
21	Toward Self-Healing Actuators: A Preliminary Concept. IEEE Transactions on Robotics, 2016, 32, 736-743.	7.3	24
22	Coupling the Microscopic Healing Behaviour of Coatings to the Thermoreversible Diels-Alder Network Formation. Coatings, 2019, 9, 13.	1.2	23
23	Structureâ€"Property Relationships of Self-Healing Polymer Networks Based on Reversible Dielsâ€"Alder Chemistry. Macromolecules, 2022, 55, 5497-5513.	2.2	19
24	A Multi-Material Self-Healing Soft Gripper. , 2019, , .		17
25	The Influence of the Furan and Maleimide Stoichiometry on the Thermoreversible Dielsâ€"Alder Network Polymerization. Polymers, 2021, 13, 2522.	2.0	16
26	Reversible Lignin-Containing Networks Using Dielsâ€"Alder Chemistry. Macromolecules, 2021, 54, 9750-9760.	2.2	16
27	Magnetic Self-Healing Composites: Synthesis and Applications. Molecules, 2022, 27, 3796.	1.7	15
28	Anthracene-based polyurethane networks: Tunable thermal degradation, photochemical cure and stress-relaxation. European Polymer Journal, 2018, 105, 412-420.	2.6	14
29	Supramolecular Self-Healing Sensor Fiber Composites for Damage Detection in Piezoresistive Electronic Skin for Soft Robots. Polymers, 2021, 13, 2983.	2.0	12
30	A Healable Resistive Heater as a Stimuli-Providing System in Self-Healing Soft Robots. IEEE Robotics and Automation Letters, 2022, 7, 4574-4581.	3.3	11
31	Self-healing sensorized soft robots. , 2022, 1, 100003.		11
32	Investigation of self-healing compliant actuators for robotics. , 2015, , .		9
33	A novel donor-Ï€-acceptor anthracene monomer: Towards faster and milder reversible dimerization. Tetrahedron, 2019, 75, 912-920.	1.0	9
34	FEA-Based Inverse Kinematic Control: Hyperelastic Material Characterization of Self-Healing Soft Robots. IEEE Robotics and Automation Magazine, 2022, 29, 78-88.	2.2	9
35	Laser sintering of self-healable and recyclable thermoset networks. European Polymer Journal, 2022, 175, 111383.	2.6	9
36	Thermal dissociation of anthracene photodimers in the condensed state: kinetic evaluation and complex phase behaviour. Physical Chemistry Chemical Physics, 2020, 22, 17306-17313.	1.3	6

#	Article	IF	Citations
37	Humins Blending in Thermoreversible Dielsâ€"Alder Networks for Stiffness Tuning and Enhanced Healing Performance for Soft Robotics. Polymers, 2022, 14, 1657.	2.0	5
38	Substituent effect on the thermophysical properties and thermal dissociation behaviour of 9-substituted anthracene derivatives. Physical Chemistry Chemical Physics, 2021, 23, 2252-2263.	1.3	4
39	Towards the understanding of halogenation in peptide hydrogels: a quantum chemical approach. Materials Advances, 2021, 2, 4792-4803.	2.6	3
40	Quasi-Static FEA Model for a Multi-Material Soft Pneumatic Actuator in SOFA. IEEE Robotics and Automation Letters, 2022, 7, 7391-7398.	3.3	2