

# Data-Driven Materials Science: Status, Challenges, and

Advanced Science

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Autonomous Discovery in the Chemical Sciences Part I: Progress. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 22858-22893.	13.8	180
2	Autonomous Discovery in the Chemical Sciences Part II: Outlook. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 23414-23436.	13.8	139
3	Autonome Entdeckung in den chemischen Wissenschaften, Teil I: Fortschritt. <i>Angewandte Chemie</i> , 2020, 132, 23054-23091.	2.0	11
4	Autonome Entdeckung in den chemischen Wissenschaften, Teil II: Ausblick. <i>Angewandte Chemie</i> , 2020, 132, 23620-23643.	2.0	4
5	Understanding the geometric diversity of inorganic and hybrid frameworks through structural coarse-graining. <i>Chemical Science</i> , 2020, 11, 12580-12587.	7.4	13
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7	Enchantment - Disenchantment-Re-Enchantment: Postdigital Relationships between Science, Philosophy, and Religion. <i>Postdigital Science and Education</i> , 2021, 3, 934-965.	5.3	18
8	Polymer Nanocomposite Data: Curation, Frameworks, Access, and Potential for Discovery and Design. <i>ACS Macro Letters</i> , 2020, 9, 1086-1094.	4.8	24
9	Machine Learned Model for Solid Form Volume Estimation Based on Packing-Accessible Surface and Molecular Topological Fragments. <i>Journal of Physical Chemistry A</i> , 2020, 124, 10330-10345.	2.5	9
10	A database of battery materials auto-generated using ChemDataExtractor. <i>Scientific Data</i> , 2020, 7, 260.	5.3	76
11	AI Applications through the Whole Life Cycle of Material Discovery. <i>Matter</i> , 2020, 3, 393-432.	10.0	86
12	An artificial intelligence-aided virtual screening recipe for two-dimensional materials discovery. <i>Npj Computational Materials</i> , 2020, 6, .	8.7	39
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14	Relativistic correction scheme for core-level binding energies from <i>GW</i> . <i>Journal of Chemical Physics</i> , 2020, 153, 114110.	3.0	15
15	Exchange Spin Coupling from Gaussian Process Regression. <i>Journal of Physical Chemistry A</i> , 2020, 124, 8708-8723.	2.5	16
16	A critical examination of compound stability predictions from machine-learned formation energies. <i>Npj Computational Materials</i> , 2020, 6, .	8.7	119
17	A Bayesian framework for adsorption energy prediction on bimetallic alloy catalysts. <i>Npj Computational Materials</i> , 2020, 6, .	8.7	44
18	<i>in silico</i> investigation of Cu(In,Ga)Se <sub>2</sub> -based solar cells. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 26682-26701.	2.8	3

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19	New Design Method for Fabricating Multilayer Membranes Using CO <sub>2</sub> -Assisted Polymer Compression Process. <i>Molecules</i> , 2020, 25, 5786.	3.8	3
20	Automated identification of deformation twin systems in Mg WE43 from SEM DIC. <i>Materials Characterization</i> , 2020, 169, 110628.	4.4	12
21	Combining multi-phase field simulation with neural network analysis to unravel thermomigration accelerated growth behavior of Cu <sub>6</sub> Sn <sub>5</sub> IMC at cold side Cu-Sn interface. <i>International Journal of Mechanical Sciences</i> , 2020, 184, 105843.	6.7	27
22	Machine learning reveals the importance of the formation enthalpy and atom-size difference in forming phases of high entropy alloys. <i>Materials and Design</i> , 2020, 193, 108835.	7.0	68
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28	An adaptive design approach for defects distribution modeling in materials from first-principle calculations. <i>Journal of Molecular Modeling</i> , 2020, 26, 187.	1.8	11
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