Regina Barzilay

List of Publications by Year
in descending order

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37 papers	5,501 citations	236612 25 h-index	329751 37 g-index
38 all docs	38 docs citations	38 times ranked	5675 citing authors

#	Article	IF	Citations
1	A Deep Learning Approach to Antibiotic Discovery. Cell, 2020, 180, 688-702.e13.	13.5	978
2	Analyzing Learned Molecular Representations for Property Prediction. Journal of Chemical Information and Modeling, 2019, 59, 3370-3388.	2.5	773
3	Prediction of Organic Reaction Outcomes Using Machine Learning. ACS Central Science, 2017, 3, 434-443.	5.3	477
4	A graph-convolutional neural network model for the prediction of chemical reactivity. Chemical Science, 2019, 10, 370-377.	3.7	430
5	A Deep Learning Mammography-based Model for Improved Breast Cancer Risk Prediction. Radiology, 2019, 292, 60-66.	3.6	401
6	Convolutional Embedding of Attributed Molecular Graphs for Physical Property Prediction. Journal of Chemical Information and Modeling, 2017, 57, 1757-1772.	2.5	317
7	Modeling Local Coherence: An Entity-Based Approach. Computational Linguistics, 2008, 34, 1-34.	2.5	316
8	Mammographic Breast Density Assessment Using Deep Learning: Clinical Implementation. Radiology, 2019, 290, 52-58.	3.6	187
9	Applications of Deep Learning in Molecule Generation and Molecular Property Prediction. Accounts of Chemical Research, 2021, 54, 263-270.	7.6	133
10	Uncertainty Quantification Using Neural Networks for Molecular Property Prediction. Journal of Chemical Information and Modeling, 2020, 60, 3770-3780.	2.5	129
11	A Deep Learning Model to Triage Screening Mammograms: A Simulation Study. Radiology, 2019, 293, 38-46.	3.6	125
12	High-Risk Breast Lesions: A Machine Learning Model to Predict Pathologic Upgrade and Reduce Unnecessary Surgical Excision. Radiology, 2018, 286, 810-818.	3.6	123
13	Current and Future Roles of Artificial Intelligence in Medicinal Chemistry Synthesis. Journal of Medicinal Chemistry, 2020, 63, 8667-8682.	2.9	118
14	Toward robust mammography-based models for breast cancer risk. Science Translational Medicine, 2021, 13, .	5.8	100
15	Using machine learning to parse breast pathology reports. Breast Cancer Research and Treatment, 2017, 161, 203-211.	1.1	87
16	Deep learning identifies synergistic drug combinations for treating COVID-19. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	87
17	Using deep learning for dermatologist-level detection of suspicious pigmented skin lesions from wide-field images. Science Translational Medicine, 2021, 13, .	5.8	78
18	Generative models for molecular discovery: Recent advances and challenges. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2022, 12, .	6.2	78

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19	Aspect-augmented Adversarial Networks for Domain Adaptation. Transactions of the Association for Computational Linguistics, 2017, 5, 515-528.	3.2	71
20	Multi-Institutional Validation of a Mammography-Based Breast Cancer Risk Model. Journal of Clinical Oncology, 2022, 40, 1732-1740.	0.8	71
21	Machine Learning Methods to Extract Documentation of Breast Cancer Symptoms From Electronic Health Records. Journal of Pain and Symptom Management, 2018, 55, 1492-1499.	0.6	60
22	The Limitations of Stylometry for Detecting Machine-Generated Fake News. Computational Linguistics, 2020, 46, 499-510.	2.5	41
23	Deep Learning to Estimate RECIST in Patients with NSCLC Treated with PD-1 Blockade. Cancer Discovery, 2021, 11, 59-67.	7.7	38
24	Optimizing risk-based breast cancer screening policies with reinforcement learning. Nature Medicine, 2022, 28, 136-143.	15.2	34
25	Towards efficient discovery of green synthetic pathways with Monte Carlo tree search and reinforcement learning. Chemical Science, 2020, 11, 10959-10972.	3.7	31
26	Representation Learning for Grounded Spatial Reasoning. Transactions of the Association for Computational Linguistics, 2018, 6, 49-61.	3.2	26
27	Automated Chemical Reaction Extraction from Scientific Literature. Journal of Chemical Information and Modeling, 2022, 62, 2035-2045.	2.5	26
28	Can machine learning improve patient selection for cardiac resynchronization therapy?. PLoS ONE, 2019, 14, e0222397.	1.1	25
29	Critical assessment of AI in drug discovery. Expert Opinion on Drug Discovery, 2021, 16, 937-947.	2.5	25
30	Pathologic findings in reduction mammoplasty specimens: a surrogate for the population prevalence of breast cancer and high-risk lesions. Breast Cancer Research and Treatment, 2019, 173, 201-207.	1.1	24
31	Machine learning to parse breast pathology reports in Chinese. Breast Cancer Research and Treatment, 2018, 169, 243-250.	1.1	22
32	Deep Learning Model to Assess Cancer Risk on the Basis of a Breast MR Image Alone. American Journal of Roentgenology, 2019, 213, 227-233.	1.0	21
33	Incidental breast carcinoma: incidence, management, and outcomes in 4804 bilateral reduction mammoplasties. Breast Cancer Research and Treatment, 2019, 177, 741-748.	1.1	11
34	Atypical ductal hyperplasia in men with gynecomastia: what is their breast cancer risk?. Breast Cancer Research and Treatment, 2019, 175, 1-4.	1.1	8
35	Exploiting Rules to Enhance Machine Learning in Extracting Information From Multi-Institutional Prostate Pathology Reports. JCO Clinical Cancer Informatics, 2020, 4, 865-874.	1.0	5
36	Generating molecules with optimized aqueous solubility using iterative graph translation. Reaction Chemistry and Engineering, 2022, 7, 297-309.	1.9	5

#	Article	IF	Citations
37	Reply to M. Eriksson et al and Z. Jin et al. Journal of Clinical Oncology, 2022, , JCO2200292.	0.8	0