Stacey Lowery Bretz

List of Publications by Year
in descending order

80 papers	2,715 citations	159585 30 h-index	197818 49 g-index
81 all docs	81 docs citations	81 times ranked	1397 citing authors

#	Article	IF	Citations
1	Novak's Theory of Education: Human Constructivism and Meaningful Learning. Journal of Chemical Education, 2001, 78, 1107.	2.3	191
2	Evidence for the Importance of Laboratory Courses. Journal of Chemical Education, 2019, 96, 193-195.	2.3	161
3	Faculty Perspectives of Undergraduate Chemistry Laboratory: Goals and Obstacles to Success. Journal of Chemical Education, 2010, 87, 1416-1424.	2.3	115
4	A continuum of learning: from rote memorization to meaningful learning in organic chemistry. Chemistry Education Research and Practice, 2012, 13, 201-208.	2.5	113
5	What Faculty Interviews Reveal about Meaningful Learning in the Undergraduate Chemistry Laboratory. Journal of Chemical Education, 2013, 90, 281-288.	2.3	103
6	Development of the Bonding Representations Inventory To Identify Student Misconceptions about Covalent and Ionic Bonding Representations. Journal of Chemical Education, 2014, 91, 312-320.	2.3	96
7	A rubric to characterize inquiry in the undergraduate chemistry laboratory. Chemistry Education Research and Practice, 2007, 8, 212-219.	2.5	92
8	Development and Assessment of A Diagnostic Tool to Identify Organic Chemistry Studentsâ€™ Alternative Conceptions Related to Acid Strength. International Journal of Science Education, 2012, 34, 2317-2341.	1.9	88
9	Investigating Affective Experiences in the Undergraduate Chemistry Laboratory: Studentsâ€™ Perceptions of Control and Responsibility. Journal of Chemical Education, 2016, 93, 227-238.	2.3	88
10	Development of an Assessment Tool To Measure Studentsâ€™ Meaningful Learning in the Undergraduate Chemistry Laboratory. Journal of Chemical Education, 2015, 92, 1149-1158.	2.3	87
11	CHEMX: An Instrument To Assess Students' Cognitive Expectations for Learning Chemistry. Journal of Chemical Education, 2007, 84, 1524.	2.3	70
12	Measuring Meaningful Learning in the Undergraduate Chemistry Laboratory: A National, Cross-Sectional Study. Journal of Chemical Education, 2015, 92, 2006-2018.	2.3	66
13	Impact of a spiral organic curriculum on student attrition and learning. Chemistry Education Research and Practice, 2008, 9, 157-162.	2.5	64
14	The Development of the Redox Concept Inventory as a Measure of Studentsâ€™ Symbolic and Particulate Redox Understandings and Confidence. Journal of Chemical Education, 2014, 91, 1132-1144.	2.3	60
15	Organic chemistry students' ideas about nucleophiles and electrophiles: the role of charges and mechanisms. Chemistry Education Research and Practice, 2015, 16, 797-810.	2.5	60
16	Studentsâ€™ Understandings of Acid Strength: How Meaningful Is Reliability When Measuring Alternative Conceptions?. Journal of Chemical Education, 2015, 92, 212-219.	2.3	60
17	Development of the enzymeâ€“substrate interactions concept inventory. Biochemistry and Molecular Biology Education, 2012, 40, 229-233.	1.2	59
18	Diagnosing changes in attitude in first-year college chemistry students with a shortened version of Bauer's semantic differential. Chemistry Education Research and Practice, 2011, 12, 271-278.	2.5	58

#	Article	IF	Citations
19	Measuring Meaningful Learning in the Undergraduate General Chemistry and Organic Chemistry Laboratories: A Longitudinal Study. Journal of Chemical Education, 2015, 92, 2019-2030.	2.3	52
20	Electrochemical benzylic oxidation of Câ€“H bonds. Chemical Communications, 2019, 55, 937-940.	4.1	52
21	Organic chemistry students' fragmented ideas about the structure and function of nucleophiles and electrophiles: a concept map analysis. Chemistry Education Research and Practice, 2016, 17, 1019-1029.	2.5	47
22	Perryâ€™s Scheme of Intellectual and Epistemological Development as a framework for describing student difficulties in learning organic chemistry. Chemistry Education Research and Practice, 2010, 11, 207-211.	2.5	45
23	Generating cognitive dissonance in student interviews through multiple representations. Chemistry Education Research and Practice, 2012, 13, 172-178.	2.5	45
24	Measuring meta-ignorance through the lens of confidence: examining students' redox misconceptions about oxidation numbers, charge, and electron transfer. Chemistry Education Research and Practice, 2014, 15, 729-746.	2.5	39
25	Moving beyond definitions: what student-generated models reveal about their understanding of covalent bonding and ionic bonding. Chemistry Education Research and Practice, 2013, 14, 214-222.	2.5	37
26	Video episodes and action cameras in the undergraduate chemistry laboratory: eliciting student perceptions of meaningful learning. Chemistry Education Research and Practice, 2016, 17, 139-155.	2.5	37
27	Enhancing the role of assessment in curriculum reform in chemistry. Chemistry Education Research and Practice, 2010, 11, 92-97.	2.5	36
28	Modeling meaningful learning in chemistry using structural equation modeling. Chemistry Education Research and Practice, 2013, 14, 421-430.	2.5	36
29	Seeing Chemistry through the Eyes of the Blind: A Case Study Examining Multiple Gas Law Representations. Journal of Chemical Education, 2013, 90, 710-716.	2.3	33
30	Using cluster analysis to characterize meaningful learning in a first-year university chemistry laboratory course. Chemistry Education Research and Practice, 2015, 16, 879-892.	2.5	33
31	â€œItâ€™s Only the Major Product That We Care About in Organic Chemistryâ€: An Analysis of Studentsâ€™ Annotations of Reaction Coordinate Diagrams. Journal of Chemical Education, 2018, 95, 1086-1093.	2.3	33
32	An expanded framework for analyzing general chemistry exams. Chemistry Education Research and Practice, 2010, 11, 147-153.	2.5	32
33	Organic chemistry studentsâ€™ challenges with coherence formation between reactions and reaction coordinate diagrams. Chemistry Education Research and Practice, 2018, 19, 732-745.	2.5	29
34	Organic chemistry studentsâ€™ interpretations of the surface features of reaction coordinate diagrams. Chemistry Education Research and Practice, 2018, 19, 919-931.	2.5	29
35	Navigating the Landscape of Assessment. Journal of Chemical Education, 2012, 89, 689-691.	2.3	27
36	Qualitative Research Designs in Chemistry Education Research. ACS Symposium Series, 2008, , 79-99.	0.5	25

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37	Synthesis and Characterization of Self-Assembled Liquid Crystals: p-Alkoxybenzoic Acids. Journal of Chemical Education, 2011, 88, 1133-1136.	2.3	25
38	Biochemistry students' ideas about shape and charge in enzymeâ€“substrate interactions. Biochemistry and Molecular Biology Education, 2014, 42, 203-212.	1.2	23
39	Paper Chromatography and UVâ€“Vis Spectroscopy To Characterize Anthocyanins and Investigate Antioxidant Properties in the Organic Teaching Laboratory. Journal of Chemical Education, 2015, 92, 183-188.	2.3	22
40	A Symmetry POGIL Activity for Inorganic Chemistry. Journal of Chemical Education, 2012, 89, 211-214.	2.3	20
41	Biochemistry students' ideas about how an enzyme interacts with a substrate. Biochemistry and Molecular Biology Education, 2015, 43, 213-222.	1.2	19
42	Organic Chemistry Studentsâ€™ Understandings of What Makes a Good Leaving Group. Journal of Chemical Education, 2018, 95, 1094-1101.	2.3	19
43	University chemistry studentsâ€™ interpretations of multiple representations of the helium atom. Chemistry Education Research and Practice, 2019, 20, 358-368.	2.5	19
44	Development of the Reaction Coordinate Diagram Inventory: Measuring Student Thinking and Confidence. Journal of Chemical Education, 2020, 97, 1841-1851.	2.3	19
45	Development of the Flame Test Concept Inventory: Measuring Student Thinking about Atomic Emission. Journal of Chemical Education, 2018, 95, 17-27.	2.3	17
46	Designing Assessment Tools To Measure Studentsâ€™ Conceptual Knowledge of Chemistry. ACS Symposium Series, 2014, , 155-168.	0.5	16
47	Dissolving Salts in Water: Studentsâ€™ Particulate Explanations of Temperature Changes. Journal of Chemical Education, 2018, 95, 504-511.	2.3	15
48	Macroscopic Observations of Dissolving, Insolubility, and Precipitation: General Chemistry and Physical Chemistry Studentsâ€™ Ideas about Entropy Changes and Spontaneity. Journal of Chemical Education, 2019, 96, 469-478.	2.3	15
49	Investigating Meaningful Learning in Virtual Reality Organic Chemistry Laboratories. Journal of Chemical Education, 2022, 99, 1100-1105.	2.3	13
50	Using PyMOL to Explore the Effects of pH on Noncovalent Interactions between Immunoglobulin G and Protein A: A Guidedâ€Inquiry Biochemistry Activity. Biochemistry and Molecular Biology Education, 2017, 45, 528-536.	1.2	12
51	Development of the Enthalpy and Entropy in Dissolution and Precipitation Inventory. Journal of Chemical Education, 2019, 96, 1804-1812.	2.3	12
52	Measuring Changes in Undergraduate Chemistry Studentsâ€™ Reasoning with Reaction Coordinate Diagrams: A Longitudinal, Multi-institution Study. Journal of Chemical Education, 2021, 98, 1064-1076.	2.3	12
53	Visualizing Molecular Chirality in the Organic Chemistry Laboratory Using Cholesteric Liquid Crystals. Journal of Chemical Education, 2016, 93, 1096-1099.	2.3	11
54	A Noncanonical Metal Center Drives the Activity of the <i>Sediminispirochaeta smaragdinae</i> Metallo-Î²-lactamase SPS-1. Biochemistry, 2018, 57, 5218-5229.	2.5	11

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55	Investigating first-year undergraduate chemistry studentsâ€™ reasoning with reaction coordinate diagrams when choosing among particulate-level reaction mechanisms. Chemistry Education Research and Practice, 2021, 22, 199-213.	2.5	10
56	Pre-Service Teacher as Researcher: The Value of Inquiry in Learning Science. Journal of Chemical Education, 2007, 84, 1530.	2.3	9
57	Investigating Radical Reactivity and Structureâ€“Property Relationships through Photopolymerization. Journal of Chemical Education, 2019, 96, 348-353.	2.3	8
58	Implementing the Professional Development Standards: An Innovative M.S. Degree for High School Chemistry Teachers. Journal of Chemical Education, 2002, 79, 1307.	2.3	7
59	What Is the True Color of Fresh Meat? A Biophysical Undergraduate Laboratory Experiment Investigating the Effects of Ligand Binding on Myoglobin Using Optical, EPR, and NMR Spectroscopy. Journal of Chemical Education, 2011, 88, 223-225.	2.3	7
60	Development of the Quantization and Probability Representations Inventory as a Measure of Studentsâ€™ Understandings of Particulate and Symbolic Representations of Electron Structure. Journal of Chemical Education, 2019, 96, 1558-1570.	2.3	7
61	Designing, Teaching, and Evaluating a Unit on Symmetry and Crystallography in the High School Classroom. Journal of Chemical Education, 2009, 86, 946.	2.3	6
62	Investigating the relationship between faculty cognitive expectations about learning chemistry and the construction of exam questions. Chemistry Education Research and Practice, 2010, 11, 212-217.	2.5	6
63	Hannah's Prior Knowledge About Chemicals: A Case Study of One Fourthâ€Grade Child. School Science and Mathematics, 2012, 112, 99-108.	0.9	6
64	Faculty Goals, Inquiry, and Meaningful Learning in the Undergraduate Chemistry Laboratory. ACS Symposium Series, 2016, , 101-115.	0.5	6
65	An integrated biophysical approach to discovering mechanisms of NDM-1 inhibition for several thiol-containing drugs. Journal of Biological Inorganic Chemistry, 2020, 25, 717-727.	2.6	6
66	A guided inquiry experiment for the measurement of activation energies in the biophysical chemistry laboratory: Decarboxylation of pyrrole-2-carboxylate. Biochemistry and Molecular Biology Education, 2006, 33, 123-127.	1.2	5
67	Trispyrazolylborate Complexes: An Advanced Synthesis Experiment Using Paramagnetic NMR, Variable-Temperature NMR, and EPR Spectroscopies. Journal of Chemical Education, 2017, 94, 1960-1964.	2.3	5
68	Finding No Evidence for Learning Styles. Journal of Chemical Education, 2017, 94, 825-826.	2.3	5
69	Supporting the Growth and Impact of the Chemistry-Education-Research Community. Journal of Chemical Education, 2019, 96, 393-397.	2.3	5
70	Adapting Interactive Interview Tasks to Remote Data Collection: Human Subjects Research That Requires Annotations and Manipulations of Chemical Structures During the COVID-19 Pandemic. Journal of Chemical Education, 2020, 97, 4196-4201.	2.3	5
71	Sherlock Holmes and the Case of the Raven and the Ambassador's Wife: An Inquiry-Based Murder Mystery. Journal of Chemical Education, 2005, 82, 1532.	2.3	4
72	Investigating the Retention Mechanisms of Liquid Chromatography Using Solid-Phase Extraction Cartridges. Journal of Chemical Education, 2009, 86, 60.	2.3	3

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73	Preparation and Characterization of a Polymeric Monolithic Column for Use in High-Performance Liquid Chromatography (HPLC). Journal of Chemical Education, 2011, 88, 675-678.	2.3	2
74	Indirect determination of zinc by thiol complexation and iodine coulometric titration with photocell detection. Microchemical Journal, 2017, 134, 119-124.	4.5	2
75	A Chronology of Assessment in Chemistry Education. ACS Symposium Series, 2013, , 145-153.	0.5	1
76	Flow Injection Analysis and Liquid Chromatography for Multifunctional Chemical Analysis (MCA) Systems. Journal of Chemical Education, 2013, 90, 500-505.	2.3	1
77	Iodine Coulometry of Various Reducing Agents Including Thiols with Online Photocell Detection Coupled to a Multifunctional Chemical Analysis Station To Eliminate Student End Point Detection by Eye. Journal of Chemical Education, 2018, 95, 777-782.	2.3	1
78	Program for the Division of Chemical Education. Journal of Chemical Education, 2006, 83, 359.	2.3	0
79	Biochemistry studentsâ€™ misconceptions regarding enzymeâ€substrate interactions. FASEB Journal, 2013, 27, 329.3.	0.5	0
80	Letter to a Young Scientist. Ohio Journal of Sciences, 2020, 120, 88.	0.1	0