Michael J Sanger

List of Publications by Year
in descending order

38 papers	1,141 citations	623734 14 h-index	395702 33 g-index
38 all docs	38 docs citations	38 times ranked	531 citing authors

#	Article	IF	Citations
1	Does the way charges and transferred electrons are depicted in an oxidationâ€"reduction animation affect studentsâ€™ explanations?. Chemistry Education Research and Practice, 2021, 22, 77-92.	2.5	1
2	Two studies comparing studentsâ€™ explanations of an oxidationâ€"reduction reaction after viewing a single computer animation: the effect of varying the complexity of visual images and depicting water molecules. Chemistry Education Research and Practice, 2019, 20, 738-759.	2.5	9
3	Analysing the distribution of questions in the gas law chapters of secondary and introductory college chemistry textbooks from the United States. Chemistry Education Research and Practice, 2014, 15, 787-799.	2.5	7
4	Investigating Studentsâ€™ Understanding of the Dissolving Process. Journal of Science Education and Technology, 2013, 22, 103-112.	3.9	20
5	How Does the Order of Viewing Two Computer Animations of the Same Oxidation-Reduction Reaction Affect Studentsâ€™ Particulate-Level Explanations?. ACS Symposium Series, 2013, , 313-340.	0.5	6
6	How does viewing one computer animation affect students' interpretations of another animation depicting the same oxidationâ€"reduction reaction?. Chemistry Education Research and Practice, 2013, 14, 286-296.	2.5	14
7	Concept Learning versus Problem Solving: Evaluating a Threat to the Validity of a Particulate Gas Law Question. Journal of Chemical Education, 2013, 90, 700-709.	2.3	11
8	Student misconceptions in writing balanced equations for dissolving ionic compounds in water. Chemistry Education Research and Practice, 2012, 13, 186-194.	2.5	37
9	Student misinterpretations and misconceptions based on their explanations of two computer animations of varying complexity depicting the same oxidationâ€"reduction reaction. Chemistry Education Research and Practice, 2012, 13, 471-483.	2.5	40
10	Do Students Learn Chemistry Content in Accelerated Summer Courses?. ACS Symposium Series, 2011, , 111-119.	0.5	1
11	Aqueous Ammonia or Ammonium Hydroxide? Identifying a Base as Strong or Weak. Journal of Chemical Education, 2010, 87, 1213-1216.	2.3	6
12	Using Soda Cans To Teach Physical Science Students about Density. Journal of Chemical Education, 2009, 86, 209.	2.3	4
13	"Which Pathway Am I?" Using a Game Approach To Teach Students about Biochemical Pathways. Journal of Chemical Education, 2009, 86, 454.	2.3	8
14	Soda Can Density and Unexpected Results. Journal of Chemical Education, 2008, 85, 18.	2.3	2
15	How Does Inquiry-Based Instruction Affect Teaching Majors' Views about Teaching and Learning Science?. Journal of Chemical Education, 2008, 85, 297.	2.3	13
16	Using Inferential Statistics to Answer Quantitative Chemical Education Research Questions. ACS Symposium Series, 2008, , 101-133.	0.5	4
17	Is Inquiry-Based Instruction Good for Elementary Teaching Majors? The Effects on Chemistry Content Knowledge and Views About Teaching and Learning Science. AIP Conference Proceedings, 2007, , .	0.4	0
18	What Are Students Thinking When They Pick Their Answer? A Content Analysis of Students' Explanations of Gas Properties. Journal of Chemical Education, 2007, 84, 870.	2.3	21

#	Article	IF	Citations
19	"Concept Learning versus Problem Solving": Does Particle Motion Have an Effect?. Journal of Chemical Education, 2007, 84, 875.	2.3	32
20	The Effects of Inquiry-Based Instruction on Elementary Teaching Majors' Chemistry Content Knowledge. Journal of Chemical Education, 2007, 84, 1035.	2.3	9
21	The Rainbow Wheel and Rainbow Matrix: Two Effective Tools for Learning Ionic Nomenclature. Journal of Chemical Education, 2006, 83, 651.	2.3	14
22	Whatever Floats (or Sinks) Your Can. Journal of Chemical Education, 2006, 83, 1632A.	2.3	4
23	Evaluating Students' Conceptual Understanding of Balanced Equations and Stoichiometric Ratios Using a Particulate Drawing. Journal of Chemical Education, 2005, 82, 131.	2.3	70
24	Simple Flame Test Techniques Using Cotton Swabs. Journal of Chemical Education, 2004, 81, 969.	2.3	10
25	Flame Tests: Which Ion Causes the Color?. Journal of Chemical Education, 2004, 81, 1776A.	2.3	8
26	Flipping Pennies and Burning Candles: Adventures in Kinetics. Journal of Chemical Education, 2003, 80, 304A.	2.3	1
27	Rate Law Determination of Everyday Processes. Journal of Chemical Education, 2002, 79, 989.	2.3	5
28	Determination of the Empirical Formula of a Copper Oxide Salt Using Two Different Methods. Journal of Chemical Education, 2002, 79, 994.	2.3	4
29	Using Computer-Based Visualization Strategies to Improve Students' Understanding of Molecular Polarity and Miscibility. Journal of Chemical Education, 2001, 78, 1412.	2.3	54
30	Can Computer Animations Affect College Biology Students' Conceptions About Diffusion & Osmosis?. American Biology Teacher, 2001, 63, 104-109.	0.2	73
31	Using a Computer Animation to Improve Students' Conceptual Understanding of a Can-Crushing Demonstration. Journal of Chemical Education, 2000, 77, 1517.	2.3	84
32	Using Particulate Drawings to Determine and Improve Students' Conceptions of Pure Substances and Mixtures. Journal of Chemical Education, 2000, 77, 762.	2.3	78
33	Addressing student misconceptions concerning electron flow in aqueous solutions with instruction including computer animations and conceptual change strategies. International Journal of Science Education, 2000, 22, 521-537.	1.9	127
34	An Analysis of College Chemistry Textbooks As Sources of Misconceptions and Errors in Electrochemistry. Journal of Chemical Education, 1999, 76, 853.	2.3	77
35	Students' Misconceptions in Electrochemistry Regarding Current Flow in Electrolyte Solutions and the Salt Bridge. Journal of Chemical Education, 1997, 74, 819.	2.3	121
36	Common student misconceptions in electrochemistry: Galvanic, electrolytic, and concentration cells. Journal of Research in Science Teaching, 1997, 34, 377-398.	3.3	161

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37	Common student misconceptions in electrochemistry: Galvanic, electrolytic, and concentration cells. , 1997, 34, 377.		2
38	Common student misconceptions in electrochemistry: Galvanic, electrolytic, and concentration cells. Journal of Research in Science Teaching, 1997, 34, 377-398.	3.3	3