Lei Bao

List of Publications by Year
in descending order

40 papers	1,069 citations	430874 18 h-index	414414 32 g-index
40 all docs	40 docs citations	40 times ranked	523 citing authors

#	Article	IF	Citations
1	Theoretical model and quantitative assessment of scientific thinking and reasoning. Physical Review Physics Education Research, 2022, 18, .	2.9	4
2	Assessment of knowledge integration in student learning of simple electric circuits. Physical Review Physics Education Research, 2022, 18, .	2.9	6
3	ANALYSIS OF TWO-TIER QUESTION SCORING METHODS: A CASE STUDY ON THE LAWSON'S CLASSROOM TEST OF SCIENTIFIC REASONING. Journal of Baltic Science Education, 2021, 20, 146-159.	1.0	3
4	Causal reasoning in understanding Newton's third law. Physical Review Physics Education Research, 2021, 17, .	2.9	4
5	Comparison of nature of science representations in five Chinese high school physics textbooks. International Journal of Science Education, 2021, 43, 1779-1798.	1.9	14
6	Knowledge integration in student learning of Newton's third law: Addressing the action-reaction language and the implied causality. Physical Review Physics Education Research, 2021, 17, .	2.9	11
7	Student knowledge integration in learning mechanical wave propagation. Physical Review Physics Education Research, 2021, 17, .	2.9	11
8	Assessment of knowledge integration in student learning of momentum. Physical Review Physics Education Research, 2020, 16, .	2.9	21
9	Assessing the longitudinal measurement invariance of the Force Concept Inventory and the Conceptual Survey of Electricity and Magnetism. Physical Review Physics Education Research, 2020, 16, .	2.9	5
10	Development of a multiple-choice problem-solving categorization test for assessment of student knowledge structure. Physical Review Physics Education Research, 2020, 16, .	2.9	4
11	Teaching towards knowledge integration in learning force and motion. International Journal of Science Education, 2019, 41, 2271-2295.	1.9	23
12	Dual-Space Information Modeling of Socio-Economic Systems under Information Asymmetry. Entropy, 2019, 21, 528.	2.2	0
13	Physics education research for 21st century learning. Disciplinary and Interdisciplinary Science Education Research, 2019, 1, .	2.9	72
14	Assessment of student understanding on light interference. Physical Review Physics Education Research, 2019, 15, .	2.9	20
15	Linking and comparing short and full-length concept inventories of electricity and magnetism using item response theory. Physical Review Physics Education Research, 2019, 15, .	2.9	6
16	Test equity in developing short version conceptual inventories: A case study on the Conceptual Survey of Electricity and Magnetism. Physical Review Physics Education Research, 2019, 15, .	2.9	5
17	Information of Complex Systems and Applications in Agent Based Modeling. Scientific Reports, 2018, 8, 6177.	3.3	4
18	Multilevel Rasch modeling of two-tier multiple choice test: A case study using Lawson's classroom test of scientific reasoning. Physical Review Physics Education Research, 2018, 14, .	2.9	20

#	Article	IF	Citations
19	Validity evaluation of the Lawson classroom test of scientific reasoning. Physical Review Physics Education Research, 2018, 14, .	2.9	26
20	Assessment of scientific reasoning: The effects of task context, data, and design on student reasoning in control of variables. Thinking Skills and Creativity, 2016, 19, 175-187.	3.5	39
21	Experimental validation of the half-length Force Concept Inventory. Physical Review Physics Education Research, 2016, 12, .	2.9	12
22	Dividing the Force Concept Inventory into two equivalent half-length tests. Physical Review Physics Education Research, 2015, 11, .	1.7	31
23	Exploring the role of conceptual scaffolding in solving synthesis problems. Physical Review Physics Education Research, 2011, 7, .	1.7	34
24	The effective use of clickers in freshmen classrooms. , 2011, , .		0
25	Sustained Effects of Solving Conceptually Scaffolded Synthesis Problems. , 2010, , .		8
26	Analyzing force concept inventory with item response theory. American Journal of Physics, 2010, 78, 1064-1070.	0.7	76
27	Are we asking the right questions? Validating clicker question sequences by student interviews. American Journal of Physics, 2009, 77, 643-650.	0.7	25
28	Using Conceptual Scaffolding to Foster Effective Problem Solving. , 2009, , .		10
29	Learning and Scientific Reasoning. Science, 2009, 323, 586-587.	12.6	163
30	Testing a new voting machine question methodology. American Journal of Physics, 2008, 76, 171-178.	0.7	58
31	Model analysis: Representing and assessing the dynamics of student learning. Physical Review Physics Education Research, 2006, 2, .	1.7	96
32	Virtual reality in introductory physics laboratories. AIP Conference Proceedings, 2005, , .	0.4	7
33	Alternative conceptions, memory, & mental models in physics education. AIP Conference Proceedings, 2005, , .	0.4	4
34	Toward the effective use of voting machines in physics lectures. American Journal of Physics, 2005, 73, 554-558.	0.7	58
35	Studentsâ€™ reasoning across contexts. AIP Conference Proceedings, 2004, , .	0.4	1
36	A computational model for physics learning. AIP Conference Proceedings, 2004, , .	0.4	0

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37	"Business-Style" Group Work in a Freshman Engineering Honors Class. AIP Conference Proceedings, 2004, , .	0.4	0
38	Model analysis of fine structures of student models: An example with Newton's third law. American Journal of Physics, 2002, 70, 766-778.	0.7	76
39	Understanding probabilistic interpretations of physical systems: A prerequisite to learning quantum physics. American Journal of Physics, 2002, 70, 210-217.	0.7	64
40	Concentration analysis: A quantitative assessment of student states. American Journal of Physics, 2001, 69, S45-S53.	0.7	48