

# Lei Bao

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8783558/publications.pdf>

Version: 2024-02-01

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	Learning and Scientific Reasoning. Science, 2009, 323, 586-587.	12.6	163
2	Model analysis: Representing and assessing the dynamics of student learning. Physical Review Physics Education Research, 2006, 2, .	1.7	96
3	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
4	Analyzing force concept inventory with item response theory. American Journal of Physics, 2010, 78, 1064-1070.	0.7	76
5	Physics education research for 21st century learning. Disciplinary and Interdisciplinary Science Education Research, 2019, 1, .	2.9	72
6	Understanding probabilistic interpretations of physical systems: A prerequisite to learning quantum physics. American Journal of Physics, 2002, 70, 210-217.	0.7	64
7	Toward the effective use of voting machines in physics lectures. American Journal of Physics, 2005, 73, 554-558.	0.7	58
8	Testing a new voting machine question methodology. American Journal of Physics, 2008, 76, 171-178.	0.7	58
9	Concentration analysis: A quantitative assessment of student states. American Journal of Physics, 2001, 69, S45-S53.	0.7	48
10	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
11	Exploring the role of conceptual scaffolding in solving synthesis problems. Physical Review Physics Education Research, 2011, 7, .	1.7	34
12	Dividing the Force Concept Inventory into two equivalent half-length tests. Physical Review Physics Education Research, 2015, 11, .	1.7	31
13	Validity evaluation of the Lawson classroom test of scientific reasoning. Physical Review Physics Education Research, 2018, 14, .	2.9	26
14	Are we asking the right questions? Validating clicker question sequences by student interviews. American Journal of Physics, 2009, 77, 643-650.	0.7	25
15	Teaching towards knowledge integration in learning force and motion. International Journal of Science Education, 2019, 41, 2271-2295.	1.9	23
16	Assessment of knowledge integration in student learning of momentum. Physical Review Physics Education Research, 2020, 16, .	2.9	21
17	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
18	Assessment of student understanding on light interference. Physical Review Physics Education Research, 2019, 15, .	2.9	20

#	ARTICLE	IF	CITATIONS
19	Comparison of nature of science representations in five Chinese high school physics textbooks. <i>International Journal of Science Education</i> , 2021, 43, 1779-1798.	1.9	14
20	Experimental validation of the half-length Force Concept Inventory. <i>Physical Review Physics Education Research</i> , 2016, 12, .	2.9	12
21	Knowledge integration in student learning of Newton's third law: Addressing the action-reaction language and the implied causality. <i>Physical Review Physics Education Research</i> , 2021, 17, .	2.9	11
22	Student knowledge integration in learning mechanical wave propagation. <i>Physical Review Physics Education Research</i> , 2021, 17, .	2.9	11
23	Using Conceptual Scaffolding to Foster Effective Problem Solving. , 2009, , .		10
24	Sustained Effects of Solving Conceptually Scaffolded Synthesis Problems. , 2010, , .		8
25	Virtual reality in introductory physics laboratories. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	7
26	Linking and comparing short and full-length concept inventories of electricity and magnetism using item response theory. <i>Physical Review Physics Education Research</i> , 2019, 15, .	2.9	6
27	Assessment of knowledge integration in student learning of simple electric circuits. <i>Physical Review Physics Education Research</i> , 2022, 18, .	2.9	6
28	Assessing the longitudinal measurement invariance of the Force Concept Inventory and the Conceptual Survey of Electricity and Magnetism. <i>Physical Review Physics Education Research</i> , 2020, 16, .	2.9	5
29	Test equity in developing short version conceptual inventories: A case study on the Conceptual Survey of Electricity and Magnetism. <i>Physical Review Physics Education Research</i> , 2019, 15, .	2.9	5
30	Alternative conceptions, memory, & mental models in physics education. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	4
31	Information of Complex Systems and Applications in Agent Based Modeling. <i>Scientific Reports</i> , 2018, 8, 6177.	3.3	4
32	Causal reasoning in understanding Newton's third law. <i>Physical Review Physics Education Research</i> , 2021, 17, .	2.9	4
33	Development of a multiple-choice problem-solving categorization test for assessment of student knowledge structure. <i>Physical Review Physics Education Research</i> , 2020, 16, .	2.9	4
34	Theoretical model and quantitative assessment of scientific thinking and reasoning. <i>Physical Review Physics Education Research</i> , 2022, 18, .	2.9	4
35	ANALYSIS OF TWO-TIER QUESTION SCORING METHODS: A CASE STUDY ON THE LAWSON'S CLASSROOM TEST OF SCIENTIFIC REASONING. <i>Journal of Baltic Science Education</i> , 2021, 20, 146-159.	1.0	3
36	Students' reasoning across contexts. <i>AIP Conference Proceedings</i> , 2004, , .	0.4	1

#	ARTICLE	IF	CITATIONS
37	A computational model for physics learning. AIP Conference Proceedings, 2004, , .	0.4	0
38	“Business-Style” Group Work in a Freshman Engineering Honors Class. AIP Conference Proceedings, 2004, , .	0.4	0
39	The effective use of clickers in freshmen classrooms. , 2011, , .		0
40	Dual-Space Information Modeling of Socio-Economic Systems under Information Asymmetry. Entropy, 2019, 21, 528.	2.2	0