Georgios Tsaparlis

List of Publications by Year
in descending order

72 papers	1,479 citations	346980 22 h-index	388640 36 g-index
74 all docs	74 docs citations	74 times ranked	719 citing authors

#	Article	IF	Citations
1	Chemistry studentsâ€™ conceptual difficulties and problem solving behavior in chemical kinetics, as a component of an introductory physical chemistry course. Chemistry Teacher International, 2022, 4, 279-296.	0.9	4
2	Explicit teaching of problem categorization using concept mapping, and an exploratory study of its effect on student achievement and on conceptual understanding â€“ the case of chemical equilibrium problems. Chemistry Teacher International, 2021, 3, 269-284.	0.9	1
3	Using electrostatic potential maps as visual representations to promote better understanding of chemical bonding. Chemistry Teacher International, 2021, 3, 391-411.	0.9	4
4	HIGHER AND LOWER-ORDER THINKING SKILLS: THE CASE OF CHEMISTRY REVISITED. Journal of Baltic Science Education, 2020, 19, 467-483.	0.4	12
5	Affective and Cognitive Outcomes of Project-Based Team Work in a Model Lower Secondary School: The Case of Nuclear Energy. Science Education International, 2020, 31, 52-64.	0.1	0
6	Proposed pedagogies for teaching and learning chemical bonding in secondary education. Chemistry Teacher International, 2019, .	0.9	2
7	Teaching and Learning Electrochemistry. Israel Journal of Chemistry, 2019, 59, 478-492.	1.0	19
8	Teaching and learning chemical bonding: research-based evidence for misconceptions and conceptual difficulties experienced by students in upper secondary schools and the effect of an enriched text. Chemistry Education Research and Practice, 2018, 19, 1253-1269.	1.4	19
9	Challenges, Barriers, and Achievements in Chemistry Education: The Case of Greece. ACS Symposium Series, 2018, , 93-110.	0.5	2
10	The logical and psychological structure of physical chemistry and its relevance to graduate students' opinions about the difficulties of the major areas of the subject. Chemistry Education Research and Practice, 2016, 17, 320-336.	1.4	28
11	Cognitive Demand. , 2015, , 164-167.		1
12	Physical chemistry education: its multiple facets and aspects. Chemistry Education Research and Practice, 2014, 15, 257-265.	1.4	16
13	The logical and psychological structure of physical chemistry and its relevance to the organization/sequencing of the major areas covered in physical chemistry textbooks. Chemistry Education Research and Practice, 2014, 15, 391-401.	1.4	13
14	Linking the Macro with the Submicro Levels of Chemistry: Demonstrations and Experiments that can Contribute to Active/Meaningful/Conceptual Learning. , 2014, , 41-61.		9
15	Cognitive Demand. , 2014, , 1-4.		2
16	Studentsâ€™ Knowledge of Nuclear Science and Its Connection with Civic Scientific Literacy in Two European Contexts: The Case of Newspaper Articles. Science and Education, 2013, 22, 1963-1991.	1.7	9
17	Using computer simulations in chemistry problem solving. Chemistry Education Research and Practice, 2013, 14, 297-311.	1.4	19
18	Learning and Teaching the Basic Quantum Chemical Concepts. Innovations in Science Education and Technology, 2013, , 437-460.	0.1	5

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19	Student Conceptions of Ionic Bonding: Patterns of thinking across three European contexts. International Journal of Science Education, 2012, 34, 2843-2873.	1.0	43
20	Applying catastrophe theory to an informationâ€processing model of problem solving in science education. Science Education, 2012, 96, 392-410.	1.8	32
21	Evaluation of questions in general chemistry textbooks according to the form of the questions and the Question-Answer Relationship (QAR): the case of intra- and intermolecular chemical bonding. Chemistry Education Research and Practice, 2011, 12, 262-270.	1.4	17
22	Lower-secondary introductory chemistry course: a novel approach based on science-education theories, with emphasis on the macroscopic approach, and the delayed meaningful teaching of the concepts of molecule and atom. Chemistry Education Research and Practice, 2010, 11, 107-117.	1.4	12
23	Students' levels of explanations, models, and misconceptions in basic quantum chemistry: A phenomenographic study. Journal of Research in Science Teaching, 2009, 46, 520-536.	2.0	83
24	Highâ€school Students' Conceptual Difficulties and Attempts at Conceptual Change: The case of basic quantum chemical concepts. International Journal of Science Education, 2009, 31, 895-930.	1.0	74
25	Learning at the Macro Level: The Role of Practical Work. Models and Modeling in Science Education, 2009, , 109-136.	0.6	17
26	Conceptual versus algorithmic learning in high school chemistry: the case of basic quantum chemical concepts. Part 1. Statistical analysis of a quantitative study. Chemistry Education Research and Practice, 2008, 9, 323-331.	1.4	19
27	Conceptual versus algorithmic learning in high school chemistry: the case of basic quantum chemical concepts. Part 2. Studentsâ€™ common errors, misconceptions and difficulties in understanding. Chemistry Education Research and Practice, 2008, 9, 332-340.	1.4	37
28	Addition of a Project-Based Component to a Conventional Expository Physical Chemistry Laboratory. Journal of Chemical Education, 2007, 84, 668.	1.1	24
29	Teaching and Learning Physical Chemistry: A Review of Educational Research. ACS Symposium Series, 2007, , 75-112.	0.5	25
30	Explicit teaching of problem categorisation and a preliminary study of its effect on student performance â€“ the case of problems in colligative properties of ideal solutions. Chemistry Education Research and Practice, 2006, 7, 114-130.	1.4	2
31	A study of group interaction processes in learning lower secondary physics. Journal of Research in Science Teaching, 2006, 43, 556-576.	2.0	46
32	Cognitive Variables in Problem Solving: A Nonlinear Approach. International Journal of Science and Mathematics Education, 2005, 3, 7-32.	1.5	18
33	Instructional Misconceptions in Acid-Base Equilibria: An Analysis from a History and Philosophy of Science Perspective. Science and Education, 2005, 14, 173-193.	1.7	36
34	A modification of a conventional expository physical chemistry laboratory to accommodate an inquiry/projectâ€based component: Method and students' evaluation. Canadian Journal of Science, Mathematics and Technology Education, 2005, 5, 111-131.	0.6	15
35	Conceptual understanding versus algorithmic problem solving: Further evidence from a national chemistry examination. Chemistry Education Research and Practice, 2005, 6, 104-118.	1.4	54
36	Nonâ€algorithmic quantitative problem solving in university physical chemistry: a correlation study of the role of selective cognitive factors. Research in Science and Technological Education, 2005, 23, 125-148.	1.4	55

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37	ANALOGIES IN CHEMISTRY TEACHING AS A MEANS OF ATTAINMENT OF COGNITIVE AND AFFECTIVE OBJECTIVES: A LONGITUDINAL STUDY IN A NATURALISTIC SETTING, USING ANALOGIES WITH A STRONG SOCIAL CONTENT. Chemistry Education Research and Practice, 2004, 5, 33-50.	1.4	28
38	PREFACE TO THE SPECIAL SECTION. Chemistry Education Research and Practice, 2004, 5, 213-214.	1.4	0
39	SECURING A FUTURE FOR CHEMISTRY EDUCATION RESEARCH AND PRACTICE. Chemistry Education Research and Practice, 2004, 5, 209.	1.4	2
40	HAS EDUCATIONAL RESEARCH MADE ANY DIFFERENCE TO CHEMISTRY TEACHING?. Chemistry Education Research and Practice, 2004, 5, 3.	1.4	3
41	Constructivism: Defense or a Continual Critical Appraisal A Response to Gil-PÃ©rez et al.. Science and Education, 2003, 12, 787-797.	1.7	22
42	A complexity theory model in science education problem solving: random walks for working memory and mental capacity. Nonlinear Dynamics, Psychology, and Life Sciences, 2003, 7, 221-244.	0.2	6
43	CHEMICAL PHENOMENA VERSUS CHEMICAL REACTIONS: DO STUDENTS MAKE THE CONNECTION?. Chemistry Education Research and Practice, 2003, 4, 31-43.	1.4	17
44	A STUDY OF THE EFFECT OF A PRACTICAL ACTIVITY ON PROBLEM SOLVING IN CHEMISTRY. Chemistry Education Research and Practice, 2003, 4, 319-333.	1.4	4
45	Nonlinear Analysis of the Effect of Working Memory Capacity on Student Performance in Problem Solving. , 2003, , 183-190.		3
46	Achievement in Chemistry Problem-Solving as a Function of the Mobility-Fixity Dimension. Perceptual and Motor Skills, 2002, 95, 914-924.	0.6	5
47	STUDENTSâ€™ ERRORS IN SOLVING NUMERICAL CHEMICAL-EQUILIBRIUM PROBLEMS. Chemistry Education Research and Practice, 2002, 3, 5-17.	1.4	45
48	QUANTUM-CHEMICAL CONCEPTS: ARE THEY SUITABLE FOR SECONDARY STUDENTS?. Chemistry Education Research and Practice, 2002, 3, 129-144.	1.4	50
49	PHYSICAL-SCIENCE KNOWLEDGE AND PATTERNS OF ACHIEVEMENT AT THE PRIMARY-SECONDARY INTERFACE PART 1. GENERAL STUDENT POPULATION. Chemistry Education Research and Practice, 2001, 2, 241-252.	1.4	0
50	THEORIES IN SCIENCE EDUCATION AT THE THRESHOLD OF THE THIRD MILLENNIUM. Chemistry Education Research and Practice, 2001, 2, 1.	1.4	6
51	TOWARDS A MEANINGFUL INTRODUCTION TO THE SCHRÃ–DINGER EQUATION THROUGH HISTORICAL AND HEURISTIC APPROACHES. Chemistry Education Research and Practice, 2001, 2, 203-213.	1.4	15
52	PHYSICAL-SCIENCE KNOWLEDGE AND PATTERNS OF ACHIEVEMENT AT THE PRIMARY-SECONDARY INTERFACE PART 2. ABLE AND TOP-ACHIEVING STUDENTS. Chemistry Education Research and Practice, 2001, 2, 253-263.	1.4	4
53	PREFACE MOLECULES AND ATOMS AT THE CENTRE STAGE. Chemistry Education Research and Practice, 2001, 2, 57.	1.4	2
54	Application of Complexity Theory to an Information Processing Model in Science Education. Nonlinear Dynamics, Psychology, and Life Sciences, 2001, 5, 267-287.	0.2	17

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55	A model of problem solving: Its operation, validity, and usefulness in the case of organic-synthesis problems. Science Education, 2000, 84, 131-153.	1.8	48
56	THE STATES-OF-MATTER APPROACH (SOMA) TO INTRODUCTORY CHEMISTRY. Chemistry Education Research and Practice, 2000, 1, 161-168.	1.4	16
57	AN INTEGRATED PHYSICAL-SCIENCE (PHYSICS AND CHEMISTRY) INTRODUCTION FOR LOWER-SECONDARY LEVEL (GRADE 7). Chemistry Education Research and Practice, 2000, 1, 281-294.	1.4	5
58	THE QUALITY OF CERAPIE: AIMING TO STRIKE A BALANCE. Chemistry Education Research and Practice, 2000, 1, 187.	1.4	0
59	INTRODUCING CERAPIE. Chemistry Education Research and Practice, 2000, 1, 1.	1.4	11
60	CHEMISTRY AND SCIENCE EDUCATION VERSUS EDUCATION: A TOPDOWN AND BOTTOM-UP RELATION. Chemistry Education Research and Practice, 2000, 1, 5.	1.4	0
61	NON-LINEAR ANALYSIS OF THE EFFECT OF WORKING-MEMORY CAPACITY ON ORGANIC-SYNTHESIS PROBLEM SOLVING. Chemistry Education Research and Practice, 2000, 1, 375-380.	1.4	10
62	â€˜CHEMICAL EDUCATION AND NEW EDUCATIONAL TECHNOLOGIESâ€™: AN INTER-UNIVERSITY PROGRAM FOR GRADUATE STUDIES. Chemistry Education Research and Practice, 2000, 1, 405-410.	1.4	1
63	CERAPIE AND THE EC(RI)CEs. Chemistry Education Research and Practice, 2000, 1, 313-314.	1.4	0
64	Education Research and Practice, 2000, 1, 217-226.	1.4	18
65	TEACHING LOWER-SECONDARY CHEMISTRY WITH A PIAGETIAN CONSTRUCTIVIST AND AN AUSBELIAN MEANINGFUL-RECEPTIVE METHOD: A LONGITUDINAL COMPARISON. Chemistry Education Research and Practice, 2000, 1, 37-50.	1.4	8
66	Students' Self-Assessment in Chemistry Examinations Requiring Higher- and Lower-Order Cognitive Skills. Journal of Chemical Education, 1999, 76, 112.	1.1	24
67	Molecular-equilibrium problems: Manipulation of logical structure and of M-demand, and their effect on student performance. Science Education, 1998, 82, 437-454.	1.8	41
68	Dimensional analysis and predictive models in problem solving. International Journal of Science Education, 1998, 20, 335-350.	1.0	42
69	Atomic and Molecular Structure in Chemical Education: A Critical Analysis from Various Perspectives of Science Education. Journal of Chemical Education, 1997, 74, 922.	1.1	78
70	Atomic orbitals, molecular orbitals and related concepts: Conceptual difficulties among chemistry students. Research in Science Education, 1997, 27, 271-287.	1.4	78
71	Higher and lower-order cognitive skills: The case of chemistry. Research in Science Education, 1997, 27, 117-130.	1.4	94
72	Achievement in Chemistry Problem-Solving as a Function of the Mobility-Fixity Dimension. , 0, .		2