SUBJECT INDEX, VOLUME 3, 2002

0. GENERAL ISSUES IN SCIENCE EDUCATION

• Technology and tragedy (Guest Editorial). J.W. Moore: (1) 3-4.
• Research and research utilization in chemical education. R. Kempa: (3) 327-343.

1. METHODS AND ISSUES OF TEACHING AND LEARNING

• An approach in supporting university chemistry teaching. G. Sirhan & N. Reid: (1) 65-75.
• Teaching chemistry progressively: From substances, to atoms and molecules, to electrons and nuclei. P.G. Nelson: (2) 215-228.
• Teachers’ continuing learning of chemistry: Some implications for science teaching. A. Goodwin: (3) 345-359.

2. CONCEPTS

• Students’ errors in solving numerical chemical-equilibrium problems. M. Kousathana & G. Tsaparlis: (1) 5-17.
• The most well-known rearrangements in organic chemistry at hand. S. Moulay: (1) 33-64.
• The learning and teaching of the concepts ‘amount of substance’ and ‘mole’. A review of the literature. Furió, R. Azcona, and Y.J. Guisasola: (3) 277-292.
• Pre-service primary teachers’ mental models of kinetic theory. N. Taylor & R.K. Coll: (3) 293-315.
• Teachers’ continuing learning of chemistry: Some implications for science teaching. A. Goodwin: (3) 345-359.

2a. STRUCTURAL CONCEPTS

• PREFACE. G. Tsaparlis: (2) 107-112.
• Describing reactivity with structural formulas, or when push comes to shove. P. Laszlo: (2) 113-118.
• Understanding delocalization and hyperconjugation in terms of (covalent and ionic) resonance structures. P. Karafiloglou: (2) 119-127.
• Quantum-chemical concepts: Are they suitable for secondary students? G. Tsaparlis and G. Papaphotis: (2) 129-144.
• Conceptualizing quanta - Illuminating the ground state of student understanding of atomic orbitals. K.S. Taber: (2) 145-158.
• Compounding quanta - Probing the frontiers of student understanding of molecular orbitals. K.S. Taber: (2) 159-173.
• Mental models in chemistry: Senior chemistry students’ mental models of chemical bonding. K. Coll and N. Taylor: (2) 175-184.
• Structural units and chemical formulae. H.-D. Barke and H. Wirbs: (2) 185-200.
• Students’ corpuscular conceptions in the context of chemical equilibrium and chemical kinetics. J.H. Van Driel: (2) 201-213.
• Teaching chemistry progressively: From substances, to atoms and molecules, to electrons and nuclei. P.G. Nelson: (2) 215-228.
• Nuclear magnetic resonance (NMR) spectroscopy: Basic principles and phenomena, and their applications to chemistry, biology and medicine. I. P. Gerothanasis, A. Troganis, V. Exarchou, and K. Barbarossou: (2) 229-252.
• Classical and quantum chemical rate constants in condensed phases. R. Kapral and S. Consta: (2) 253-268.

3. CONCEPT TEACHING AND LEARNING
• Teaching chemistry progressively: From substances, to atoms and molecules, to electrons and nuclei. P.G. Nelson: (2) 215-228.
• Student teachers’ problems in teaching ‘electrolysis’ with a key demonstration. M. Ahtee, T. Asunta & H. Palm: (3) 317-326.

4. PROBLEM SOLVING AND OTHER HIGHER-ORDER COGNITIVE SKILLS (HOCS)
• Students’ errors in solving numerical chemical-equilibrium problems. M. Kousathana & G. Tsaparis: (1) 5-17.

5. ASSESSMENT. -

6. SCIENCE-TECHNOLOGY-ENVIRONMENT-SOCIETY (STES)
• Teaching Biodiesel: A sociocritical and problem-oriented approach to chemistry teaching, and students’ first views on it. I. Eilks: (1) 77-85.
• The use of the Arrhenius equation in the study of deterioration and of cooking of foods - Some scientific and pedagogic aspects. A.L. Petrou, M. Roulia, & K. Kampouris: (1) 87-97.

7. NET. -

8. ATTITUDES
• The development of the chemistry attitudes and experiences questionnaire (CAEQ). R.K. Coll & J. Dalgety: (1) 19-32.

9. CHEMICAL EDUCATION IN EUROPE: CURRICULA AND POLICIES

10. TEACHER TRAINING
• Student teachers’ problems in teaching ‘electrolysis’ with a key demonstration. M. Ahtee, T. Asunta & H. Palm: (3) 317-326.

11. EXPERIMENTS AND PRACTICAL WORK. -