

SUBJECT INDEX, VOLUME 2, 2001

0. GENERAL ISSUES IN SCIENCE EDUCATION

- Theories in science education at the threshold of the third millennium (*Editorial*). *G. Tsaparlis*: (1) 1-4.

1. METHODS AND ISSUES OF TEACHING AND LEARNING

- A language problem revisited. *A.H. Johnstone & D. Selepeng*: (1) 19-29.
- Using theories of learning to inform tertiary chemistry pedagogy. *R.K. Coll & T.G.N. Taylor*: (3) 215-226.
- Structural chemistry and spatial ability in different cultures. *H.-D. Barke & E. Temehegn*: (3) 227-239.
- Physical-science knowledge and patterns of achievement at the primary-secondary interface: Part 1. General student population. *C. Kampourakis, K. Georgousi, & G. Tsaparlis*: (3) 241-252.
- Physical-science knowledge and patterns of achievement at the primary-secondary interface: Part 2. Able and top-achieving students. *K. Georgousi, C. Kampourakis, & G. Tsaparlis*: (3) 253-263.

2. CONCEPTS

- Spanish prospective teachers' initial ideas about teaching chemical change. *Martín Del Pozo & R. Porlán Ariza*: (3) 265-283.
- Changes of extent of reaction in open chemical equilibria. *J. Solaz & J. Quilez*: (3) 303-312.

2a. STRUCTURAL CONCEPTS: CONTRIBUTIONS FROM SCIENCE, SCIENCE EDUCATION, HISTORY AND PHILOSOPHY OF SCIENCE

- PREFACE - Introduction to the Theme Issue: Molecules and atoms at the centre stage. *G. Tsaparlis*: (2) 57-65.
- Modified Lewis theory: Part 1, Polar covalent bonds and hypervalency. *P.G. Nelson*: (2) 67-72.
- Modified Lewis theory: Part 2, Coordinate and nonintegral bonds. *P.G. Nelson*: (3) 179-182.
- Teaching the VSEPR model and electron densities. *R.J. Gillespie & C.F. Matta*: (2) 73-90.
- Natural bond orbitals and extensions of localized bonding concepts. *F. Weinhold & C.R. Landis*: (2) 91-104.
- Structure in inorganic chemistry. *S.F.A. Kettle*: (2) 105-107.
- Teaching the structural nature of biological molecules: Molecular visualization in the classroom and in the hands of students. *D.R. Canning & R. Cox*: (2) 109-122.
- Building the structural concepts of chemistry: Some considerations from educational research. *K.S. Taber*: (2) 123-158.
- Do we have to introduce history and philosophy of science or is it already 'inside' chemistry? *M. Niaz & M.A. Rodríguez*: (2) 159-164.
- The new philosophy of chemistry and its relevance to chemical education. *E. Scerri*: (2) 165-170.
- Helping students to make inferences about the atomic realm by delaying the presentation of atomic structure. *R. Toomey, E. dePierro, & F. Garafalo*: (3) 183-202.

- Towards a meaningful introduction to the Schrödinger equation through historical and heuristic approaches. *G. Tsaparlis*: (3) 203-213.

3. CONCEPT TEACHING AND LEARNING

- Constructing chemical concepts in the classroom?: Using research to inform practice. *K.S. Taber*: (1) 43-51.

4. PROBLEM SOLVING AND OTHER HIGHER-ORDER COGNITIVE SKILLS (HOCS)

- Alternative assessment as (critical) means of facilitating HOCS-promoting teaching and learning in chemistry education. *U. Zoller*: (1) 9-17.
- The predicting role of cognitive variables in problem solving in mole concept: *K-W. L. Lee, W.-U. Tang, N.-K. Goh, & L.-S. Chia*: (3) 285-301.

5. ASSESSMENT

- Alternative assessment as (critical) means of facilitating HOCS-promoting teaching and learning in chemistry education. *U. Zoller*: (1) 9-17.
- Fixed-response questions with a difference. *A.H. Johnstone & A. Ambusaidi*: (3) 313-327.

6. SCIENCE-TECHNOLOGY-ENVIRONMENT-SOCIETY (STES)

- Water and air pollution: Primary students' conceptions about "itineraries" and interactions of substances. *H. Stavridou & D. Marinopoulos*: (1) 31-41

7. NEW EDUCATIONAL TECHNOLOGIES (NET). —

8. ATTITUDES. —

9. CHEMICAL EDUCATION IN EUROPE: CURRICULA AND POLICIES

- Whither chemical education? A personal view. *S.F.A. Kettle*: (1) 5-8.

10. TEACHER EDUCATION AND TRAINING. —

11. EXPERIMENTS AND PRACTICAL WORK

- Simple demonstrations of the energy exchange between system and its surroundings. *D. Šišović & N. Šišović*: (3) 329-332.