

CONTENTS, VOLUME 1, 2000

Title and author	Issue	Pages
<b>EDITORIALS</b>		
• Introducing <i>CERAPIE</i>	1	1-3
• Chemistry and science education versus education: A top-down and bottom-up relation	1	5-7
• The quality of <i>CERAPIE</i> : Aiming to strike a balance	2	187-188
• <i>CERAPIE</i> and the <i>EC(RI)CEs</i> <i>G. Tsaparlis</i>	3	313-314
<b>INVITED CONTRIBUTIONS</b>		
Teaching of chemistry - Logical or psychological? <i>A.H. Johnstone</i>	1	9-15
Should chemistry lessons be more intellectually challenging? <i>H.-J. Schmidt</i>	1	17-26
<b>(Report from a workshop)</b>		
Quality criteria for research papers on science education: How can they be used to improve manuscripts submitted for publication? <i>O. de Jong, H.-J. Schmidt, &amp; U. Zoller</i>	1	27-30
<b>(Invited research communication)</b>		
Science teachers' awareness of findings from education research <i>N. Costa, L. Marques, &amp; R. Kempa</i>	1	31-36
Interdisciplinary systemic <i>HOCS</i> development – The key for meaningful <i>STES</i> oriented chemical education <i>U. Zoller</i>	2	189-200
Teaching chemistry as rhetoric of conclusions or heuristic principles – A history and philosophy of science perspective <i>M. Niaz &amp; M. A. Rodríguez</i>	3	315-322
Fixed response: What are we testing? <i>A.H. Johnstone &amp; A. Ambusaidi</i>	3	323-328

---

**RESEARCH REPORTS**

Teaching lower-secondary chemistry with a piagetian constructivist and an ausbelian meaningful-receptive method: A longitudinal comparison <i>E. Zarotiadou &amp; G. Tsaparlis</i>	1	37-50
The teaching of chemistry: Who is the learner? <i>A. Goodwin</i>	1	51-60
Travaux pratiques en chimie et representation de la reaction chimique par l'equation-bilan dans les registres macroscopique et microscopique: Une etude en classe de seconde (15 – 16 ans) <i>A. Laugier &amp; A. Dumon</i>	1	61-75
Developing students' understanding of chemical change: What should we be teaching? <i>P. Johnson</i>	1	77-90
How to teach the concept of heat of reaction: A study of prospective teachers' initial ideas <i>O. de Jong</i>	1	91-96
Water in context: Many meanings for the same word <i>M.A. Pedrosa &amp; M.H. Dias</i>	1	97-107
Computerized molecular modeling - The new technology for enhancing model perception among chemistry educators and learners <i>N. Barnea &amp; Y. J. Dori</i>	1	109-120
Use of the Internet in the teaching of chemistry in Finnish schools: A case study <i>I. Varjola</i>	1	121-128
Mass conservation in chemical reactions: The development of an innovative teaching strategy based on the history and philosophy of science <i>M. F. Paixão &amp; A. Cachapuz</i>	2	201-215
Chemistry teaching in lower secondary school with methods based on: a) psychological theories; b) the macro, representational, and submicro levels of chemistry <i>A. Georgiadou &amp; G. Tsaparlis</i>	2	217-226
Chemistry textbook approaches to chemical equilibrium and student alternative conceptions <i>M.A. Pedrosa &amp; M.H. Dias</i>	2	227-236

Primary school teachers' views on fundamental chemical concepts <i>G. Papageorgiou &amp; D. Sakka</i>	2	237-247
Primary student teachers' understanding of the particulate nature of matter and its transformations during dissolving <i>N. Valanides</i>	2	249-262
Approaching the concepts of acids and bases by cooperative learning <i>D. Sisovic &amp; S. Bojovic</i>	2	263-275
Learners' explanations for chemical phenomena <i>K.S. Taber &amp; M. Watts</i>	3	329-353
Primary student teachers' understanding of the process and effects of distillation <i>N. Valanides</i>	3	355-364
An idea of science: Attitudes towards chemistry and chemical education expressed by artistic paintings <i>C. Hilbing &amp; H.-D. Barke</i>	3	365-374

---

## RESEARCH COMMUNICATIONS

Evaluation of different strategies for the effective use of the World Wide Web in the learning and teaching of university level chemistry <i>P.C. Yates</i>	1	129-133
Dyslexic students in chemistry classes: Their difficulties with chemical formulae <i>A. Ragkousis</i>	2	277-280
Non-linear analysis of effect of working-memory capacity on organic-synthesis problem-solving <i>D. Stamovlasis &amp; G. Tsaparlis</i>	3	375-380

---

## THE PRACTICE OF CHEMISTRY EDUCATION: PAPERS

On the use of concept maps at different stages of chemistry teaching <i>D. Sisovic &amp; S. Bojovic</i>	1	135-144
Gaseous equilibria: Some overlooked aspects <i>C. Giomini, G. Marrosu, M.E. Cardinali, &amp; A. Paolucci</i>	1	145-149

---

Ionic equilibrium calculations: A problem solving approach <i>L. Cardellini</i>	1	151-160
The states-of-matter approach ( <i>SOMA</i> ) to introductory chemistry <i>G. Tsaparlis</i>	1	161-168
The chemistry graduate destined for employment but with no experience of it. Does it make sense? <i>R.G. Wallace</i>	1	169-174
Updated inorganic and organometallic laboratory course for junior chemistry students <i>L. Szepes, A. Kotschy, &amp; G. Vass</i>	1	179-182
An integrated physical-science (physics and chemistry) introduction for lower-secondary level (grade 7) <i>G. Tsaparlis &amp; K. Kampourakis</i>	2	281-294
The presentation of chemistry logically driven or applications-led? <i>N. Reid</i>	3	381-392
Teaching chemometrics with photography experiments in a university-level course on experimental design <i>D. Stamovlasis</i>	3	393-399

---

### THE PRACTICE OF CHEMISTRY EDUCATION: NOTES

The chemistry of photography in full daylight <i>C.P. Hadjiantoniou-Maroulis &amp; A.J. Maroulis</i>	1	175-177
Periodic table software for high school (second edition) <i>V. Viossat</i>	3	401-404

---

### THE PRACTICE OF CHEMISTRY EDUCATION: REPORTS

A new chemistry curriculum in a newly founded university: Design under constraints <i>C.R. Theocharis &amp; E. Leontidis</i>	2	295-302
Towards a school of specialization for chemistry teachers in Italy: The Tuscan experience <i>A. Bargellini</i>	2	303-311

---

*'Chemical Education and New Educational Technologies': An inter-university programme for graduate studies* 3 405-410  
*C. Tzougraki, M.P. Sigalas, G. Tsaparlis, & N. Spyrellis*

---

**REVIEWERS, VOLUME 1, 2000** 3 411

---

**CONTENTS , VOLUME 1, 2000** 3 412-416

---

**AUTHOR INDEX, VOLUME 1, 2000** 3 417-420

---

**SUBJECT INDEX, VOLUME 1, 2000** 3 421-423

---

**GUIDELINES FOR SUBMISSIONS** 1 183-185  
3 424-426

---

**NEWS AND ANNOUNCEMENTS** 3 427-429

---