

---

CONTENTS, VOLUME 5, 2004

---

Title and author	Issue	Pages
------------------	-------	-------

---

**EDITORIAL**

Securing a future for CERP <i>G. Tsaparlis</i>	3	209-212
---	---	---------

---

**Invited Special Section:  
CONTRIBUTIONS OF EDUCATIONAL RESEARCH TO  
THE PRACTICE OF CHEMISTRY EDUCATION**

**EDITORIAL**

Has educational research made any difference to chemistry teaching? <i>G. Tsaparlis</i>	1	3-4
Securing a future for chemical education <i>J.K. Gilbert, R. Justi, J.H. Van Driel, O. De Jong, &amp; D.F. Treagust</i>	1	5-14
What research tells us about using analogies to teach chemistry <i>M. Orgill &amp; G. Bodner</i>	1	15-32
Preface to the Special Section <i>G. Tsaparlis</i>	3	213-214
Pedagogical content knowledge as a way forward: Applied research in chemistry education <i>R. Bucat</i>	3	215-228
The future shape of chemistry education <i>P. Mahaffy</i>	3	229-245
The laboratory in chemistry education: Thirty years of experience with developments, implementation, and research <i>A. Hofstein</i>	3	247-264

---

**STANDARD SECTION (REVIEWED CONTRIBUTIONS)**

---

**RESEARCH REPORTS**

- |  |   |         |
|--|---|---------|
| 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<br><i>P. Sarantopoulos &amp; G. Tsaparlis</i> | 1 | 33-50   |
| Group discussions as a tool for investigating students' concepts<br><i>H. Eybe &amp; H.-J. Schmidt</i>   | 3 | 265-280 |
| Changes in concentration and in partial pressure in chemical equilibria: Students' and teachers' misunderstandings<br><i>J. Quilez</i>   | 3 | 281-300 |
| Can final examinations amplify students' misconceptions in chemistry?<br><i>T.L. Nahum, A. Hofstein, R. Mamlok-Naaman, &amp; N. Bar-Dov</i>  | 3 | 301-325 |

**THE PRACTICE OF CHEMISTRY EDUCATION: PAPERS**

- |  |   |         |
|--|---|---------|
| L' équation de réaction: Un nœud d'obstacles difficilement franchissable<br><i>A. Laugier &amp; A. Dumon</i>   | 1 | 51-68   |
| A historical approach to the development of chemical equilibrium through the evolution of the affinity concept: Some educational suggestions<br><i>J. Quilez</i> | 1 | 69-87   |
| The chemical equation: A cluster of problems which are difficult to overcome<br><i>A. Laugier &amp; A. Dumon</i>   | 3 | 327-342 |

---

**Theme Issue:**  
**CHEMISTRY AND ENVIRONMENTAL EDUCATION**  
**(Guest Editors : Uri ZOLLER & Michael SCOULLOS)**

---

**EDITORIAL**

- |   |   |       |
|---|---|-------|
| Chemistry and environmental education<br><i>U. Zoller</i> | 2 | 95-97 |
|---|---|-------|

**RESEARCH REPORTS (EMPIRICAL STUDIES)**

- |   |   |        |
|---|---|--------|
| The influence of computer-assisted education on environmental knowledge and environmental awareness<br><i>İ. Morgil, S. Arda, N. Seçken, S.Yavuz, &amp; Ö. Özyalçin Oskay</i> | 2 | 99-110 |
|---|---|--------|
-

Learning beyond school: Establishing a laboratory for sustainable education <i>M. Schallies &amp; Claudia Eysel</i>	2	111-126
Using a field trip to a wetland as a guide for conceptual understanding in environmental education – A case study of a pre-service teacher’s research <i>R.T. Tal</i>	2	127-142
An interdisciplinary model for teaching the topic “foods”: A contribution to modern chemical education <i>A. Mavropoulos, M. Roulia, and A.L. Petrou</i>	2	143-155
Development of cognitive conducts during a computer simulated environmental analysis <i>M.L. Eichler, J.C. Del Pino, &amp; L.Da C. Fagundes</i>	2	157-174
HOCS-promoting assessment of students’ performance on environment-related undergraduate chemistry <i>A. Lubezky, Y.J. Dori, and U. Zoller</i>	2	175-184

---

## THE PRACTICE OF CHEMISTRY EDUCATION

The methodological framework of the development of the educational package “Water in the Mediterranean” <i>M. Scoullios, A. Alampei, &amp; V. Malotidi</i>	2	185-206
---	---	---------

---

## NEWS AND ANNOUNCEMENTS

1	89-91
3	343-347

---

## REVIEWERS, VOLUME 5, 2004

3	348
---	-----

---

## CONTENTS , VOLUME 5, 2004

3	349-351
---	---------

---

## AUTHOR INDEX, VOLUME 5, 2004

3	352-354
---	---------

---

## SUBJECT INDEX, VOLUME 5, 2004

3	355-357
---	---------

---