

INDICES

Cumulative Contents of Volume 3

RESEARCH REVIEWS

New technologies for the preparation of micro– and nanostructured materials with potential applications in drug delivery and clinical diagnostics	11
<i>N. Ventosa, J. Veciana, S. Sala, M. Muntó, M. Cano, and M. Gimeno</i>	
Inter-matrix synthesis of polymer stabilised metal nanoparticles for sensor applications	19
<i>D.N. Muraviev</i>	
Scanning probe microscopies for analytical studies at the nanometer scale	33
<i>M.J. Esplandiu</i>	
Small scale structures: the fabrication of polymeric nanostructures for biomedical applications using pattern replication techniques	47
<i>C.A. Mills, E. Martínez, A. Errachid, G. Gomila, A. Samsó, and J. Samitier</i>	
Toward nanoanalytical chemistry: case of nanomaterial integration into [bio]sensing systems	57
<i>A. Merkoçi, and S. Alegret</i>	
Micro– and nano-electromechanical systems for [bio]molecular analysis	67
<i>J. Bausells</i>	
Stratigraphic and tectonosedimentary development of the Eocene Sant Llorenç del Munt and Montserrat fan-delta complexes	125
<i>M. López-Blanco</i>	
Aminoacyl – tRNA synthetases: a complex system beyond protein synthesis	149
<i>T. Bori-Sanz, T. Guitart, and L. Ribas</i>	
Long-term changes in extreme temperatures and precipitation in Spain	331
<i>M. Brunet., J. Sigró, P.D. Jones, O. Saladié, E. Aguilar, A. Moberg, D. Lister, and A. Walther</i>	
The history of the El Niño – Southern Oscillation according to lacustrine and marine sediments	343
<i>S. Giralt, A. Moreno, R. Bao, A. Sáez, B.L. Valero, J.J. Pueyo, B.B. Klosowska, A. Hernández, P. González-Sampériz, and C. Taberner</i>	
Climatic and land use changes on the NW of Iberian Peninsula recorded in a 1,500-year record from Lake Sanabria	355
<i>R. Julià, J.A. Luque, S. Riera, and J.A. Alejandro</i>	
Planktonic foraminifera and their proxies for the reconstruction of surface-ocean climate parameters	371
<i>P.G. Mortyn, and M.A. Martínez-Botí</i>	
Reconstructing past seawater pH from boron isotopes in carbonates	385
<i>C. Pelejero, and E. Calvo</i>	
Drivers of atmospheric CO ₂ concentrations over glacial to interglacial time scales	395
<i>A. Rosell-Melé, M. Escala, A. Martínez-García, and N. Núñez</i>	
Quaternary paleoclimatology, neotropical biodiversity, and potential effects of global warming	405
<i>V. Rull, T. Vegas-Vilarrúbia, S. Nogué, E. Montoya, N. Cañellas, and A. Lara</i>	

Palynological evidence for climatic change along the eastern Iberian Peninsula and Balearic Islands	415
<i>R. Pérez-Obiol</i>	
Holocene environmental history and human impact in the Pyrenees	421
<i>A. Pèlachs, J.M. Soriano, J. Nadal, and A. Esteban</i>	
Nanoscope semiconductor quantum rings	447
<i>J.I. Climente, and J. Planelles</i>	
Health risks arising from the dietary intake of chemical contaminants: a case study of the consumption of edible marine species in Catalonia, NE Spain	459
<i>J.L. Domingo</i>	
The biological basis of the aging process	469
<i>A. Naudí, M. Jové, D. Cacabelos, E. Ilieva, J. Boada, V. Ayala, M. Portero-Otin, and R. Pamplona</i>	
Algorithms and cryptographic protocols using elliptic curves	481
<i>J.M. Miret, R. Moreno, J. Pujolàs, and M. Valls</i>	
Biological rhythms in the marine environment: the Norway lobster as a case study	493
<i>J. Aguzzi, and F. Sardà</i>	

RESEARCH ARTICLES

Dynamics of air pollution in the North-Western Mediterranean Basin (Catalonia) in summer using high-resolution air quality modelling	167
<i>J.M. Baldasano, P. Jiménez, O. Jorba, E. López, R. Parra, and C. Pérez</i>	
Nutrient pollution of waters: eutrophication trends in European marine and coastal environments	181
<i>J.L. Rovira, and P. Pardo</i>	
Thermal energy storage with phase change materials in building envelopes	501
<i>L.F. Cabeza, M. Medrano, C. Castellón, A. Castell, C. Solé, J. Roca, and M. Nogués</i>	

FOCUS

Enric Casassas memorial lecture 2004: Nanoparticle- and nanorod-biomaterial hybrid systems for sensor, circuitry and motor applications	79
<i>I. Willner</i>	
Nanoscience and nanotechnology activities in Catalonia	91
<i>A. Oliva</i>	
Battista Grassi: a zoologist for malaria	187
<i>E. Capanna</i>	
Microbes and Society	197
<i>F. Ruiz Berraquero</i>	
Acetic acid bacteria in oenology	511
<i>A. Mas, M.J. Torija, A. González, M. Poblet, and J.M. Guillamón</i>	
Effect of post design on endodontically restored teeth	523
<i>A. Pérez, C. González, J.L. Sancho, and P.J. Rodríguez</i>	
Background, current status and future prospects of transgenic crop plant development	531
<i>T. Capell, C. Zhu, L. Bassie, A. Peremartí, S. Naqvi, K. Ramessar, S. Gómez, and P. Christou</i>	

FORUM

Chemistry research in Catalonia: 1996-2002	95
<i>S. Alegret, A. Aguilar, J. Sales, F. Sánchez, and M. del Valle</i>	
Mathematics in Catalonia: 1996-2002	103
<i>J. Cufí, G. Gómez, G. Guasp, A. Reventós, and O. Serra</i>	
Research and innovation plan for Catalonia: 2005-2008	203
<i>DURSI</i>	
Veterinary Science in Catalonia: 1996-2002	221
<i>M.T. Paramio</i>	
Industrial Engineering in Catalonia: 1996-2002	249
<i>J. Agulló</i>	

BIOGRAPHY AND BIBLIOGRAPHY

Professor Ramon Margalef (1919– 2004)	297
<i>J.D. Ros</i>	
Professor Yuri Nikolayevich Vershinin (1932– 2006)	539
<i>B.P. Sobolev</i>	

HISTORICAL CORNER

Fr. Eduard Vitoria Miralles	431
<i>L. Victori</i>	

NEWS

Researchers from University of Valencia propose a minimal genome containing 206 protein-coding genes	111
The Technical University of Catalonia (UPC) and NANOCEM	111
International Malaria Consortium establishes its Secretariat in Barcelona	111
Woman engineer from Alacant among the TR100.	112
European LIFE Project to preserving bear's populations in the Pyrenees	112
<i>Pierolapithecus catalaunicus</i> , a new Middle Miocene great ape discovered in Catalonia	112
Sustainable viticulture and winery wastes management	113
Conference on Public Communication of Science and Technology	113
Congress on hazelnut	113
Aquaculture Europe 2004 (AE2004)	114
Engineering Education in Sustainable Development 2004 (EESD2004) and the Declaration of Barcelona	114
17th Conference of Physicians and Biologists of Catalan Language	114
General Assembly of the Union Académique International (UIA) (International Union of Academies) held in Barcelona	115
Challenges for Geomagnetism, Aeronomy and Seismology in the XXI Century	115
2004 EUROSOLAR Award to Ecoserveis, Barcelona	115

International Conference on Robotics and Automation	319
One hundred years of the Institut Químic de Sarrià (IQS Technical College)	319
European Federation of Biotechnology moved to Barcelona	319
The wine tastes of Tutankhamun studied by University of Barcelona researchers	319
Joan Massagué and co-workers identify genes for the spread of breast cancer to the lungs	320
James Watson, Doctor Honoris Causa by the Autonomous University of Barcelona	320
Paul Dayton awarded the First Ramon Margalef Prize in Ecology and Environmental Sciences	320
Pedro Alonso, from the University of Barcelona, selected a solidarity hero by <i>Time</i> magazine	320
Biocat, the BioRegion of Catalonia	435
Researchers of the Cavanilles Institute for Biodiversity and Evolutive Biology of the <i>Universitat de València</i> described the second smallest genome known so far	435
Biomedical Research Cluster inaugurated in Barcelona	435
Joan Massagué, invited lecturer to inaugurate the celebration of the centenary of the Institute for Catalan Studies	436
Mas-Colell will serve as Secretary General of the European Research Council.	436
CosmoCaixa, 2006 European Museum of the Year.	436
Sir John H. Lawton awarded the 2nd Ramon Margalef Prize in Ecology and Environmental Sciences	436
Contributions to Science Most Visited Article Awards 2003, 2004 and 2005.	436
Obituary: Yuri Nikolayevitch Vershinin (1932-2006)	437
Obituary: Josep Egozcue (1940-2006)	438
Book review: Anàlisi química quantitativa	438
Book review: Handbook of mosses of the Iberian Peninsula and the Balearic Islands: illustrated keys genera and species.	438
The Euroscience Open Forum (ESOF 2008)	549
Research Park at the Autonomous University of Barcelona	549
Lynn Margulis, Doctor Honoris Causa by the Autonomous University of Barcelona	549
World Conference on Science & Technology Parks	549
Invasive species spreading throughout Mediterranean ecosystems: zebra mussel and Asian tiger mosquito	550
Contributions to Science Most Visited Article Award 2006	550
Harold A. Mooney awarded the 2007 Ramon Margalef Prize in Ecology and Environmental Sciences	550
Joan Massagué recipient of the 2007 Passano Award	550
Obituary: Creu Casas (1913-2007)	551