Georgios D. Chryssikos

Director of Research
Theoretical and Physical Chemistry Institute

Phone: +30 210 7273819
E-mail: gdchryss@eie.gr

Education

1987	Ph.D. in Physical Inorganic Chemistry, Brown University, Providence, RI, USA
1983	Diploma of Chemistry, University of Athens

Research appointments

2004-	Coordinator, Applied Spectroscopy Laboratory, TPCI/NHRF
2002-	Director of Research at the Theoretical and Physical Chemistry Institute, NHRF
1998-2002	Senior Researcher at TPCI/NHRF
1992-1998	Associate Researcher at TPCI/NHRF
1988-1991	Assistant Researcher at the TPCI/NHRF.
1985-1986	Travelling Scholar from Brown University to NHRF, Athens.
1984-1987	Research and Teaching Assistant, Chemistry Department, Brown University, USA

Main research interests

- Crystallochemistry of minerals. Structure / property relationships with emphasis in the study of clays by Near-Infrared spectroscopy. Clay-based hybrid materials.
- Structural / spectroscopic characterization of polymers – biopolymers. Secondary structures and interactions at interfaces. Colloids.
- Application of spectroscopic techniques to industrial production monitoring and quality control - Chemometrics.
- Synthesis of inorganic and hybrid materials (glassy, crystalline, ceramic) and the use of vibrational spectroscopic techniques (Fourier transform infrared and Raman) for their structural characterization.

External funding

Coordinator of about 20 research projects funded by the private sector, or by National and European sources.

Conferences and invited talks

GDC has participated in more than 60 international conferences, 12 invited.

Teaching activities

Graduate seminar courses in Applied Vibrational Spectroscopy. Univ. of Athens (Dept. of Biology) and Univ. of Ioannina (Dept. of Materials Engineering)

Honors and Awards

1988	The Potter Prize for the best doctorate Thesis in Chemistry, Brown University, USA
1987	AT&T Prize for outstanding research, Brown University, USA
1984	William T. King Award for excellence in teaching, Brown University, USA.

Professional affiliations and activities

Member of the Clay Minerals Society (USA) and the American Mineralogical Society.
Associate Editor of Clays & Clay Minerals (2014 -)

Publications

>100 publications in international journals, >30 papers in refereed conference proceedings, 2 international patents, co-editor of one book. More than 3600 non-self citations (h-index=32).

Selected recent publications

1. "Revisiting the infrared spectrum of the water-smectite interface". A. Kuligiewicz, A. Derkowski, M. Szczerba, V. Gionis and G. D. Chryssikos, Clays & Clay Miner., 63, 15-29 (2015)

2. "Near-infrared investigation of folding sepiolite". M. Tsampodimou, V. J. Bukas, E. T. Stathopoulou, V. Gionis and G. D. Chryssikos, American Mineralogist, 100, 195-202, 2015.

3. "Synchronous ATR infrared and NIR spectroscopy investigation of sepiolite upon drying". V. J. Bukas, M. Tsampodimou, V. Gionis and G. D. Chryssikos, Vibr. Spectrosc, 68, 51-60 (2013)
4. "Vibrational investigation of indigo-palygorskite association(s) in synthetic Maya Blue", C. Tsiantos, M. Tsampodimou, G. H. Kacandes, M. Sanchez del Rio, V. Gionis and G. D. Chryssikos, J. Mater. Sci., 47, 3415-3428 (2012)
3. "Trioctahedral entities in palygorskite: Near-infrared evidence for sepiolite-palygorskite polysomatism", E. T. Stathopoulou, M. Suárez, E. García-Romero, M. Sánchez del Río, G. H. Kacandes, V. Gionis and G. D. Chryssikos, Eur. J. Mineralogy, Eur. J. Mineral. 23, 567-576 (2011)
4. "Complexation of Lysozyme with Poly(sodium(sulfamate-carboxylate)isoprene)", M. Karayianni, S. Pispas, G. D. Chryssikos, V. Gionis, S. Giatrellis, and G. Nounesis, Biomacromolecules, 12, 1679-1706 (2011)
5. "A combined synchrotron powder diffraction and vibrational study of the thermal treatment of palygorskite-indigo to produce Maya Blue", M. Sánchez del Río, E. Boccaleri, M. Milanesio, G. Croce, W. van Beek, C. Tsiantos, G. D. Chryssikos, V. Gionis, G. H. Kacandes, M. Suárez and E. García-Romero, J. Mater. Sci., 44, 5524 (2009)
7. "Bone diagenesis: new data from Infrared Spectroscopy and X-ray Diffraction", E.T. Stathopoulou, V. Psycharis, G.D. Chryssikos, V. Gionis and G. Theodorou, Palaeogeography Palaeoclimatology Palaeoecoloy, **226**, 168-174 (2008)