

ΒΙΟΓΡΑΦΙΚΟ ΣΗΜΕΙΩΜΑ

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EDUCATION

- Doctorate in Condensed Matter Physics, National Technical University of Athens, School of Applied Mathematical and Physical Sciences, Department of Physics, Greece (2000).
- Master's Degree in Physics, University of Oklahoma, Department of Physics and Astronomy, U.S.A. (1993). Military service 1989–1991.
- Diploma in Mechanical Engineering, National Technical University of Athens, Greece (1988).

RESEARCH & TEACHING APPOINTMENTS

- 6/2014 - : Application Scientist A, TPCI, NHRF, Athens, Greece.
- 10/2007-5/2014: Application Scientist B, TPCI, NHRF, Athens, Greece.
- 9/2004-9/2007: Research Associate and Adjunct Lecturer, National Technical University of Athens (NTUA), School of Applied Mathematical and Physical Sciences (SAMPS), Department of Physics, Greece.
- 9/2003-7/2004: Adjunct Lecturer, University of Patras, Department of Materials Science, Greece.
- 4/2000-12/2002: Postdoctoral Researcher, National Research Council (CNR), Institute for the Study of Nanostructured Materials (ISMN), Bologna division, Italy.
- 1/1994-3/2000: Teaching and Research Assistant, NTUA, SAMPS, Department of Physics, Greece.
- 1/1992-6/1993: Teaching Assistant, University of Oklahoma, Department of Physics and Astronomy, Norman, Oklahoma, USA.

MAIN RESEARCH INTERESTS

Vibrational spectroscopic characterization of materials aiming to determine or clarify variations of their structural units at the micro/meso/nano-scale and possibly arrive at correlations with some of their properties.

- Vibrational Spectroscopy (Raman and Infrared) in Materials Physical Chemistry
 - (a) focus on structure-property correlations in ionic glasses with targeted advanced functionalities. In many cases these functionalities are developed with post-synthesis treatment (e.g. laser irradiation towards development of new linear optical properties, thermal-electric-field poling for nonlinear optical properties, micro- or nano-indentation for improved mechanical properties).
 - (b) other applications in vibrational spectroscopy include hybrid perovskite materials, mineralogy, cultural heritage, surface-enhanced Raman scattering and industrial applications.
 - (c) work in Condensed Matter Physics up to 2009 includes transition metal oxides (high temperature cuprate superconductors, manganites, vanadates), fullerenes and derivative systems, other materials for applications (e.g. hybrid organic/inorganic solid state photovoltaic cells, semiconductors, etc).
- Second Harmonic Generation characterization of materials (glasses etc) with non-linear optical properties.

On several occasions D. Palles acts as the liaison person, in charge of performing vibrational spectroscopy measurements on behalf of TPCI researchers' external collaborators.

RESEARCH PROJECTS

Coordinator Assistant or participant in 14 national and international research projects in collaboration with academic and industrial organizations (GSRT/ESPA national projects: Greek Infrastructures, KRIPIS, PENED, EPET, etc; EC projects: Marie Curie-TMR, STREP, TOK, ERA.Net-RUS).

CONFERENCES

33 international and 12 national conferences, 15 talks to Universities/Institutes.

HONORS & AWARDS

Fellowship of the Greek State Scholarship Foundation (IKY) for doctorate thesis (Nov. 1994 - Apr. 1998).

Fellowship of the Greek State Scholarship Foundation (IKY) for post-doctoral research (Nov. 2003–Oct. 2004).

PUBLICATIONS

75 refereed publications in journals, 12 refereed publications in conference proceedings, 92h conference publications or presentations.

Google Scholar 24.03.2022 update:

Citations: more than 1820; h-index: 22.

SELECTED RECENT PUBLICATIONS

1. "Vibrational study of thermally ion-exchanged sodium aluminoborosilicate glasses", E. Stavrou, D. Palles, E.I. Kamitsos, A. Lipovskii, D. Tagantsev, Y. Svirko, S. Honkanen, [J. Non-Cryst. Solids 401 \(2014\) 232](#).
2. "Transition and post-transition metal ions in borate glasses: Borate ligand speciation, cluster formation, and their effect on glass transition and mechanical properties", D. Möncke, E.I. Kamitsos, D. Palles, R. Limbach, A. Winterstein-Beckmann, T. Honma, Z. Yao, T. Rouxel, and L. Wondraczek, [J. Chem. Phys. 145 \(2016\) 124501](#).
3. "Halogen Effects on Ordering and Bonding of CH_3NH_3^+ in $\text{CH}_3\text{NH}_3\text{PbX}_3$ (X = Cl, Br, I) Hybrid Perovskites: A vibrational spectroscopic study", R. Niemann, A. Kontos, D. Palles, E.I. Kamitsos, A. Kaltzoglou, F. Brivio, P. Falaras, P. Cameron, [The Journal of Physical Chemistry C 120 \(2016\) 2509-2519](#).
4. "Vibrational spectroscopic and bond valence study of structure and bonding in Al_2O_3 -containing AgI-AgPO_3 glasses", D. Palles, I. Konidakis, C.P.E. Varsamis, E.I. Kamitsos, [Royal Society of Chemistry Advances 6 \(2016\) 16697](#).
5. "Synthesis, thermal and structural properties of pure TeO_2 glass and zinc-tellurite glasses", N.S. Tagiara, D. Palles, E.D. Simandiras, V. Psycharis, A. Kyritsis, E.I. Kamitsos, [J. Non-Cryst. Solids 457 \(2017\) 116](#). (highly cited)
6. "Removal of phosphate from aqueous solutions by adsorption onto $\text{Ca}(\text{OH})_2$ treated natural clinoptilolite", D. Mitrogiannis, M. Psychoyou, I. Baziotis, V.J. Inglezakis, N. Koukouzas, N. Tsoukalas, D. Palles, E.I. Kamitsos, G. Oikonomou, G. Markou, [Chem. Eng. J. 320 \(2017\) 510](#). (highly cited)
7. "Femtosecond laser-induced transformations in ultra-low expansion glass: microstructure and local density variations by vibrational spectroscopy", Ilias

Efthimiopoulos, Dimitrios Palles, Sören Richter, Uwe Hoppe, Doris Möncke, Lothar Wondraczek, Stefan Nolte, and Efstratios Kamitsos, [J. Appl. Phys. 123 \(2018\) 233105](#).

8. "Nanographene oxide-TiO₂ photonic films as plasmon-free substrates for surface-enhanced Raman scattering", Papadakis, Dimitrios; Diamantopoulou, Angeliki; Pantazopoulos, Petros-Andreas; Palles, Dimitrios; Sakellis, Ilias; Boukos, Nikos; Stefanou, Nikolaos; Likodimos, Vlassis, [Nanoscale 11 \(2019\) 21542-53](#).

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