

## Nikolaos Kelaidis

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### EDUCATION

- Ph.D. in Physics, Aristotle University of Thessaloniki, Greece (2009)
- M.Sc. in Microelectronics, University of Athens, Greece (2002)
- B.Sc. in Physics, University of Athens (1996)

### PROFESSIONAL EXPERIENCE AND APPOINTMENTS

2023 – present: Research Associate, NHRF, Athens  
2020 – 2022 Research Associate, NCSR Demokritos  
2019 – 2020 Research Associate, NHRF, Athens  
2017 – 2018 Research Associate, Coventry University  
2012 – 2016 Post-doctoral Research Assistant, NCSR Demokritos  
2004 – 2010 PhD fellowship, NCSR Demokritos  
2003 – 2011 Lecturer on contract, Technical Educational Institute of Chalkida  
1998 – 1999 Research Assistant, NCSR Demokritos  
1997 – 1998 Marie Currie Fellow, CNR Italy (Bologna)

### MAIN RESEARCH INTERESTS

- Structural, Mechanical, Electronic and magnetic properties of finite and periodic systems, Density Functional Theory.
- Materials for energy applications

- Thermoelectric materials
- Structural and electronic properties of 2D materials.
- CVD/MBE growth of graphene & 2D materials (TMDs, Topological Insulators)
- Semiconductor device growth & electrical characterization and simulation

## HONORS – AWARDS - FUNDING

- NCSR 'Demokritos', PhD scholarship (204-2008)
- Marie Currie Fellow (TMR)

## PUBLICATIONS - PRESENTATIONS

- ~50 articles in refereed journals, 1 articles in conference proceedings, 400 citations, Google Scholar [profile](#) ; Orcid ID [profile](#)

## SELECTED RECENT PUBLICATIONS

1. "The electronic properties of the SnO/PbO systems: a DFT study", N Kelaidis, S Bousiadi, M Zervos, A Chroneos, NN Lathiotakis, Scientific Reports 10 (1), 1-8, 2020. <https://doi.org/10.1038/s41598-020-73703-y>
2. "Optical response, lithiation and charge transfer in Sn-based 211 MAX phases with electron localization function", MA Hadi, Nikolaos Kelaidis, Petros-Panagis Filippatos, S-RG Christopoulos, Alexander Chroneos, SH Naqib, AKMA Islam, Journal of Materials Research and Technology, Volume 18, 2022, Pages 2470-2479, 2022. <https://doi.org/10.1016/j.jmrt.2022.03.083>
3. "Hybrid copper halide material with perovskite like structure with tetrahedral units; synthesis, characterization and optical properties", Anna Ioannou, George C Anyfantis, Karmen Milonakou-Koufoudaki, George Danezis, Constatinos A Georgiou, Vassilis Psycharis, Catherine P Raptopoulou, Constantina Kollia, Nikolaos Kelaidis, Nektarios N Lathiotakis, George A Mousdis, Polyhedron, Vol. 231, p. 116247 (2023).
4. "A roadmap of strain in doped anatase TiO<sub>2</sub>", Kelaidis, N., Kordatos, A., Christopoulos, S.-R.G., Chroneos, A., Scientific Reports, 8 (1), art. no. 12790 (2018). DOI: [10.1038/s41598-018-30747-5](https://doi.org/10.1038/s41598-018-30747-5)
5. "Mechanical behaviors, lattice thermal conductivity and vibrational properties of a new MAX phase Lu<sub>2</sub>SnC", MA Hadi, Nikolaos Kelaidis, SH Naqib, Alexander Chroneos, AKMA Islam, Journal of Physics and Chemistry of Solids, Vol. 129, pp. 162-171 (2019). <https://doi.org/10.1016/j.jpcs.2019.01.009>
6. Kanidi, M., Dagkli, A., Kelaidis, N., Palles, D., Aminalragia-Giamini, S., Marquez-Velasco, J., Colli, A., Dimoulas, A., Lidorikis, E., Kandyla, M., Kamitsos, E.I., Surface-Enhanced Raman Spectroscopy of Graphene Integrated in Plasmonic Silicon Platforms with Three-Dimensional Nanotopography (2019) Journal of Physical Chemistry C, 123 (5), pp. 3076-3087. DOI: [10.1021/acs.jpcc.8b10356](https://doi.org/10.1021/acs.jpcc.8b10356)