

CV

Name: Katerinopoulou Katerina
Phone: 2641074143
Rank: Laboratory Teaching Staff - Department of Business Administration
of Food & Agricultural Enterprises
Knowledge Area: Food Technology - Development of Innovative Packaging Materials

Academic Titles

1999 B.Sc. Chemistry Departmentt, University of Patras
2003 MSc, Chemistry Department, University of Patras: “Advanced Technology Materials Chemistry”
2008 MSc, Department of Materials Science, University of Patras.
[http:// nemertes.lis.upatras.gr/dspace/handle/123456789/1631](http://nemertes.lis.upatras.gr/dspace/handle/123456789/1631)
2017 PhD, Department of Business Administration of Food and Agricultural Enterprises, University of Patras «Title: Development of Innovative Biodegradable Hybrids Using Renewable Raw Materials».
<https://nemertes.lis.upatras.gr/jspui/handle/10889/10855>

Special knowledge - TECHNIQUES FOR MATERIAL CHARACTERIZATION:

Study of crystallinity of materials and determination of average size of crystallites by X-ray diffraction spectroscopy (XRD)

Nitrogen adsorption-desorption isotherms for the determination of the specific surface area (BET method) and material pore size distribution (BJH method)

Qualitative analysis of samples and identification of various chemical groups by FTIR spectroscopy and UV-VIS spectroscopy

Elemental surface analysis with X-ray photoelectron spectroscopy (XPS)

Morphology analysis with Scanning Electron Microscopy (SEM)

Thermobarimetric analysis (TGA)

Research Interests

Hybrid organic-inorganic nanocomposites. Synthesis / structure characterization, investigation of mechanical and barrier properties.

Geographic origin of agricultural products via isotopic ratio of stable isotopes estimation.

Publications

1. Constantinos E Salmas, Eleni Kollia, Learda Avdylaj, Anna Kopsacheili, Konstantinos Zaharioudakis, Stavros Georgopoulos, Areti Leontiou, Katerina Katerinopoulou, Georgios Kehayias, Anastasios Karakassides, Charalampos Proestos, Aris E Giannakas. **Thymol@ Natural Zeolite Nanohybrids for Chitosan/Poly-Vinyl-Alcohol Based Hydrogels Applied As Active Pads for Strawberries Preservation.** Preprints, June 2023 doi:10.20944/preprints202306.0681.v1
2. Konstantinos Safakas, Iro Giotopoulou, Archontoula Giannakopoulou, Katerina Katerinopoulou, Georgia C. Lainioti, Haralambos Stamatis, Nektaria-Marianthi Barkoula and Athanasios Ladavos. **Designing antioxidant and antimicrobial polyethylene films with bioactive compounds/clay nanohybrids for potential packaging applications.** *Molecules* (2023), 28, 2945. <https://doi.org/10.3390/molecules28072945>
3. Aris Giannakas; Constantinos Salmas; Dimitrios Moschovas; Vassilios K. Karabagias; Ioannis Karabagias; Maria Baikousi; Stavros Georgopoulos; Areti Leontiou; Katerina Katerinopoulou; N. E. Zafeiropoulos and Apostolos Avgeropoulos. **Development, Characterization, and Evaluation as Food Active Packaging of Low-Density-Polyethylene-Based Films Incorporated with Rich in Thymol Halloysite Nanohybrid for Fresh "Scaloppini" Type Pork Meat Fillets Preservation** *Polymers* (2023), 15(2), 282; <https://doi.org/10.3390/polym15020282>
4. Anna-Akrivi Thomatou, Eleni Psarra, Eleni C. Mazarakioti, Katerina Katerinopoulou, Georgios Tsirogiannis, Anastasios Zotos, Achilleas Kontogeorgos, Angelos Patakas and Athanasios Ladavos **‘Stable Isotope Analysis for the Discrimination of the Geographical Origin of Greek Bottarga ‘Avgotaracho Messolongiou’: A Preliminary Research’** MDPI, *Foods* (2022) 11, 2960. <https://doi.org/10.3390/foods11192960>
5. George Tsirogiannis, Anna-Akrivi Thomatou, Eleni Psarra, Eleni C. Mazarakioti, Katerina Katerinopoulou, Anastasios Zotos, Achilleas Kontogeorgos, Angelos Patakas and Athanasios Ladavos **‘Probabilistic Machine Learning for the Authentication of the Protected Designation of Origin of Greek Bottarga from Messolongi: A Generic Methodology to Cope with Very Small Number of Samples’** MDPI, *Applied Sciences* (2022) 12, 6335. doi.org/10.3390/app12136335
6. Katerina Katerinopoulou, Achilleas Kontogeorgos, Constantinos E. Salmas, Angelos Patakas and Athanasios Ladavos **‘Geographical Origin Authentication of Agri-Food Products: A Review’** MDPI, *Foods* (2020) 9, 489, doi:10.3390/foods9040489
7. K. Katerinopoulou, A. Giannakas, K. Grigoriadi, N. Barkoula, A. Ladavos **‘Preparation, characterization and Biodegradability Assessment of Maize Starch-(PVOH)/Clay Nanocomposite Films’**, *Journal of Starch*, (2018) doi.org/10.1002/star.201800076
8. K. Katerinopoulou, A. Giannakas, K. Grigoriadi, N. Barkoula, A. Ladavos **‘Preparation and characterization of acetylated corn starch-(PVOH)/clay nanocomposites films’**, *Journal of Carbohydrate Polymers*, 102, 216-222, (2014)
9. G.Z. Papageorgiou, E. Karandrea, D. Giliopoulos, D.G. Papageorgiou, A. Ladavos, K. Katerinopoulou, D.S. Achilias, K.S. Triantafyllidis, D.N. Bikiaris. **‘Effect of clay structure and type of organomodifier on the thermal properties of poly(ethylene terephthalate) based nanocomposites’**, *Journal of Thermochemica Acta*, 567, 84-96, (2014)
10. G. Papakonstantinou, M.K. Daletou, A. Kotsifa, K. Katerinopoulou, T. Ioannides and S.G. Neophytides, **“Non Noble Metal Electrocatalysts for High Temperature PEM Fuel Cells”** The Electrochemical Society, Article in ECS Transactions 25(1):181-189, (2009) doi:10.1149/1.3210570
11. A.G. Kalampounias, K. Katerinopoulou, S. N. Yannopoulos and N. Bouropoulos **“Textural and structural studies of sol-gel derived CaO and MgO silica glasses”**, *Journal of Non-Crystalline Solids*, Volume 354, Issues 2-9, pp. 749-754, (2008)

Conferences

12. K. Katerinopoulou, N. Barkoula, A. Giannakas, A. Lantavos. **‘Composition and characterization of biodegradable nanocomposite films of starch - clay.’** 4th Panhellenic Conference on Green Chemistry and Sustainable Development, 30 Oct-1 November 2014, Ioannina

13. Nektaria-Marianthi Barkoula, Aris Giannakas, Kalouda Grigoriadi, Maria Vlacha, Katerina Katerinopoulou, Athanasios Ladavos, **“Effect of layered silicate addition on the thermomechanical response of polymers for food packaging applications.”** 6th Panhellenic Conference on Thermal Analysis & Calorimetry, Therma 2014, 26-28 September 2014
14. Lantavos Athanasios, Katerinopoulou Katerina, Giannakas Aris, **“Synthesis and characterization of nanocomposites with starch-glycerol-polyvinyl alcohol”**, Panhellenic Chemistry Conference, Thessaloniki 2011
15. K. Katerinopoulou, A. Giannakas, A. Ladavos **“Preparation and characterization of acetylated starch/clay nanocomposites”** Panhellenic Conference on Solid State Physics and Materials Science, 26-29 September 2010, Ioannina.
16. G. Papakonstantinou, M.K. Daletou, A. Kotsifa, K. Katerinopoulou, T. Ioannides and S.G. Neophytides. **“Non Noble Metal Electrocatalysts for High Temperature PEM Fuel Cells”** 216th ECS Meeting, The Electrochemical Society, Vienna, Austria, October 4-9 (2009)
17. A. Kalambounias, K. Katerinopoulou, S. Giannopoulos, N. Bouropoulos. **“Composition and Characterization of Bioactive Glasses”**, 1st Two-Day Meeting of the Hellenic Society of Biomaterials 7-8 October 2006, Athens
18. A.G. Kalampounias, N. Bouropoulos, K. Katerinopoulou and S. N. Yannopoulos, **“Textural and structural studies of bioactive glasses: A comparison between CaO and MgO modified silica glasses”**, presented in the XI International Conference on the Physics of Non-Crystalline Solids, 29 October - 2 November 2006, Rhodes, Greece
19. D. Delimaris, A. Katerinopoulou, S. Makrygianni, A. Mamasioulas, M. Michalopoulou, T. Ioannidis, **“Transparent superinsulating silica aerogels”**, (poster) 5th International Exhibition and Conference on Environmental Technology (HELECO '05), HELEXPO Exhibition Center, ATHENS, 3-6 February 2005
20. E. Economopoulos, D. Delimaris, A. Katerinopoulou, S. Makrygianni, T. Ioannidis, **“Translucent monolithic SiO₂”**, 5th Panhellenic Conference on Chemical Engineering, THESSALONIKI, May 2005
21. D. Delimaris, A. Katerinopoulou, S. Makrygianni, T. Ioannidis, **“Transparent SiO₂ Superconducting Aircraft”**, 4th Panhellenic Conference on Chemical Engineering, PATRA, May 2003
22. S. Makrygianni, A. Katerinopoulou, Th. Ioannidis, **“Composition of mixed carbon gel-Metal Oxides from organic Resins”**, 3rd Panhellenic Conference on Chemical Engineering, ATHENS, May 2001
23. D. Delimaris, A. Katerinopoulou, S. Makrygianni, E. Pavlidou, E. Hatzikraniotis and T. Ioannides, **“Nanostructured Nickel and Cobalt Hydroxide Obtained by non-conventional drying techniques”**, Euromat 2001, Rimini, Italy, 10-14 June 2001

Patent

- 2004 Patent for the manufacture of transparent silica gels (with Th. Ioannidis, D. Delimaris, S. Makrygianni).