

## CURRICULUM VITAE

### Maria Karayianni

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### Education

- Ph.D. in Polymer Science, University of Athens, Greece (2012).
- M.Sc. in Polymer Science, University of Athens, Greece (2007).
- B.S. in Physics, University of Ioannina, Greece (2004).

### Research Appointments

- 3/2020 – Today      Postdoctoral researcher in the framework of the project **INSPIRED-INSTRUCT-EL hub**: «Center for the Provision and Development of Integrated Structural Biology Research Services » of the action «The National Research Infrastructures on Integrated Structural Biology, Drug Screening Efforts and Drug Target Functional Characterization - INSPIRED» (EPAnEK 2014-2020), implemented at the Institute of Chemical Biology of the National Hellenic Research Foundation, Athens, Greece.
- 9/2016 – 12/2019      R&D Project Manager (Horizon 2020) at Creative Nano PC, Athens, Greece (former Artia Nano Engineering & Consulting), mainly involved with the implementation and management of the project "**PROCETS** – PROtective composite Coatings via Electrodeposition and Thermal Spraying" (H2020-NMP-PILOTS-2015).
- 3-7/2016      Postdoctoral researcher at the Theoretical and Physical Chemistry Institute of the National Hellenic Research Foundation, Athens,

Greece.

- 1-9/2015 Postdoctoral researcher in the project "**POLINNOVA**: Strengthening the research capacity and innovation potential of the Institute of Polymers at the Bulgarian Academy of Sciences for further integration into the ERA" (FP7-REGPOT-2012-2013-1), Institute of Polymers, Bulgarian Academy of Sciences, Sofia, Bulgaria.
- 12/2012 – 11/2014 Postdoctoral researcher in the project "**NANOMACRO**: Functional Self-assembled Nanostructures from Block Copolymers and Proteins" of the national action "ARISTEIA I" (GSRT – NSRF 2007-2013), Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Athens, Greece.
- 2-11/2012 Postdoctoral researcher at the Theoretical and Physical Chemistry Institute of the National Hellenic Research Foundation, Athens, Greece.

### **Main Research Interests**

- Self-assembly of macromolecules in solution: amphiphilic block copolymers, polyelectrolytes, polyelectrolyte block copolymers, proteins, polymeric micelles, polyelectrolyte nanoparticles, protein-polyelectrolyte complexes, biopolymers.
- Complexation process between proteins and polyelectrolyte homo- and block copolymers, micelles, nanoparticles, and biopolymers.
- Preparation protocols for the development of block polyelectrolyte micelles and nanoparticles, as well as electrostatically self-assembled macromolecular complexes.
- Structural studies of proteins by means of spectroscopic and calorimetric techniques.
- Drug delivery systems.
- Light scattering techniques (dynamic, static and electrophoretic), as well as spectroscopic techniques (fluorescence, UV-Vis, IR, Raman, circular dichroism).

### **External Funding**

Participant in 2 national and several European research projects in collaboration with academic and industrial organizations.

## Conferences

6 international and 4 national conferences.

## Publications

9 original publications in refereed journals, co-author of 2 book chapters.

## Selected Publications

1. M. Karayianni, G. Mountrichas, S. Pispas, "Solution behavior of poly(sodium(sulfamate-carboxylate)isoprene), a pH sensitive and intrinsically hydrophobic polyelectrolyte", *J. Phys. Chem. B*, **2010**, *114* (33), 10748-10755. DOI: [10.1021/jp104838f](https://doi.org/10.1021/jp104838f)
2. M. Karayianni, S. Pispas, G. D. Chryssikos, V. Gionis, S. Giatrellis, G. Nounesis, "Complexation of lysozyme with poly(sodium(sulfamate-carboxylate)isoprene)", *Biomacromolecules*, **2011**, *12* (5), 1697-1706. DOI: [10.1021/bm200066t](https://doi.org/10.1021/bm200066t)
3. M. Karayianni, S. Pispas, "Complexation of stimuli-responsive star-like amphiphilic block polyelectrolyte micelles with lysozyme", *Soft Matter*, **2012**, *8* (33), 8758-8769. DOI: [10.1039/C2SM26084K](https://doi.org/10.1039/C2SM26084K)
4. M. Karayianni, V. Gancheva, S. Pispas, P. Petrov, "Complex formation between lysozyme and stabilized micelles with a mixed poly(ethylene oxide)/poly(acrylic acid) shell", *J. Phys. Chem. B*, **2016**, *120* (9), 2625-2637. DOI: [10.1021/acs.jpcc.6b00550](https://doi.org/10.1021/acs.jpcc.6b00550)
5. M. Karayianni, R. Radeva, N. Koseva, S. Pispas, "Electrostatic complexation of a double hydrophilic block polyelectrolyte and proteins of different molecular shape", *J. Polym. Sci., Part B: Polym. Phys.*, **2016**, *54* (15), 1515-1529. DOI: [10.1002/polb.24047](https://doi.org/10.1002/polb.24047)