

# Emmanouela Filippidi

Assistant Professor

Department of Materials Science and Technology

University of Crete

Affiliated Researcher, IESL, FORTH

Orcid ID: 0000-0002-4044-0022

[www.materials.uoc.gr/~filippidi](http://www.materials.uoc.gr/~filippidi)

filippidi@materials.uoc.gr

## PUBLICATIONS

---

1016 citations, h-index 9 (Google Scholar)

- 12 Bernstein J.H., **Filippidi E.**, Waite J.H. and Valentine M.T. Effects of sea water pH on marine mussel plaque maturation. **Soft Matter**, 16 (40), 9339-9346 (2020)
- 11 Cristiani T.R., **Filippidi E.**, Behrens R., Valentine M.T. and Eisenbach C.D. Tailoring the toughness of elastomers by incorporating ionic cross-linking. **Macromolecules**, 53 (10), 4099-4109 (2020)
- 10 **Filippidi E.\***, Cristiani T.R.\*., Eisenbach C.D., Waite J.H., Israelachvili J.N., Ahn B.K. and Valentine M.T. Toughening elastomers using mussel-inspired iron-catechol complexes. **Science**, 358 (6362), 502-505 (2017) \*equal contribution
- 9 Wilhelm M.H., **Filippidi E.**, Waite J.H. and Valentine M.T. Influence of multi-cycle loading on the structure and mechanics of marine mussel plaques, **Soft Matter**, 13 (40), 7381-7388 (2017)
- 8 Seo S., Lee D.W., Ahn J.S., Cunha K., **Filippidi E.**, Ju S.W., Shin E., Kim B.-S., Levine Z.A., Lins R.D., Israelachvili J.N., Waite J.H., Valentine M.T., Shea J.E. and Ahn B.K. Significant performance enhancement of polymer resins by bioinspired dynamic bonding. **Advanced Materials**, 29 (39), 1703026 (2017)
- 7 **Filippidi E.**, DeMartini D., Malo de Molina P., Danner E.W., Kim J., Helgeson M.E., Waite J.H. and Valentine M.T. The microscopic network structure of mussel (*Mytilus*) adhesive plaques. **J. R. Soc. Interface**, 12 (113), 20150827 (2015)
- 6 **Filippidi E.**, Patel A.R., Bouwens E.C.M., Voudouris P. and Velikov K.P. All-natural oil-filled microcapsules from water-insoluble proteins. **Advanced Functional Materials**, 24 (38), 5962-5968 (2014)
- 5 Franceschini A., **Filippidi E.**, Guazzelli E. and Pine D.J. Dynamics of non-Brownian fiber suspensions under periodic shear. **Soft Matter**, 10 (35), 6722-6731 (2014)
- 4 Franceschini A., **Filippidi E.**, Guazzelli E. and Pine D.J. Transverse alignment of fibers in a periodically sheared suspension: an absorbing phase transition with a slowly-varying control parameter. **Physical Review Letters**, 107 (25), 250603 (2011)
- 3 Kinahan M.E., **Filippidi E.**, Köster S., Hu X., Evans H.M., Pfohl T., Kaplan D.L., Wong J. Tunable silk: using microfluidics to fabricate silk fibers with controllable properties. **Biomacromolecules**, 12 (5), 1504-1511 (2011)
- 2 **Filippidi, E.**, Michailidou, V., Loppinet, B., Rühe, J., Fytas G. Brownian diffusion close to a polymer brush. **Langmuir**, 23 (9), 5139-5142 (2007)
- 1 Kaufman L.J., Brangwynne C.P., Kasza K.E., **Filippidi E.**, Gordon V.D., Deisboeck T.S., Weitz D.A. Glioblastoma multiforme shows distinct invasion and remodeling patterns in three dimensional collagen matrices of different concentration. **Biophysical Journal**, 89 (1), 635-650 (2005)

## MANUSCRIPTS IN PREPARATION

---

- 15 Alexandris S., Pyromali C., Peponaki K., Mavromanolakis A., Pantazidis C., Moghimi E., Floudas G., Sakellariou G., Vlassopoulos D. and **Filippidi E.** From molecular to macroscopic properties of amorphous and semi-crystalline epoxy networks with metal coordination bonds: a dielectric, thermal, and mechanical study.
- 14 DeMartini D., Sampson I., Waite J.H., Valentine M.T. and **Filippidi E.** Not all plaques are equal: variability in porosity among marine mussel genera.
- 13 **Filippidi E.**, McCall P.M., Wang J., Lemaitre R., Jülicher F., Hyman A.A. Deciphering the molecular grammar of protein liquid-liquid phase separation: the role of arginine and tyrosine in low-complexity domains.