

Nihan Sengokmen-Ozsoz

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Education

- 2020 - 2024** PhD Materials Science and Engineering - The University of Sheffield, Sheffield, UK
- 2018 - 2019** MSc Materials Science and Engineering - The University of Sheffield, Sheffield, UK
- 2011 - 2016** BSc Metallurgical and Materials Engineering - Dokuz Eylul University, Izmir, Turkey

Work Experience

- July 2024 – present** Department of Materials Science and Engineering, Gebze Technical University, Gebze, Kocaeli, Turkey
Lecturer
- Sept 2021 – Dec 2023** Department of Materials Science and Engineering, The University of Sheffield, Sheffield, UK
Graduate Teaching Assistant

Teaching Experience

- MSE 423 – Materials for Additive Manufacturing
- ME 211 – Materials Science for Engineers
- ENVE 213 – Materials Science for Environmental Engineers
- MSE 471 – Introduction to Polymer Science and Engineering
- GTU 101 – Extracurricular Activities
- GTU 110 – Scientific and Technological Activities

Publications

Journal Articles

Suresh A., **Sengokmen-Ozsoz, N.**, Ye, A., Lovejoy, J., Campos, M., Makris, E., Claeysens, F., Liu, C., and Rowan, S. (2025). Balancing strength, toughness, and shrinkage in 3D porous carbon architectures through partial carbonization of template-coating pairs. *Polymer*, 129217. <https://doi.org/10.1016/j.polymer.2025.129217>

Sengokmen-Ozsoz, N. & Claeysens, F. (2025). Designing Tomorrow's Polymers: Enabling Multiscale Porous Structures from High Internal Phase Emulsions via Additive Manufacturing. *Current Opinion in Colloid & Interface Science*, 101921. <https://doi.org/10.1016/j.cocis.2025.101921>

Sengokmen-Ozsoz, N., Boston, R., Dean, J. S., Rodenburg, C., & Claeysens, F. (2025). Fabrication of Hierarchically Porous Carbon Lattices Derived from 3D-Printed Polymerized High Internal Phase Emulsions. *Carbon*, 234. <https://doi.org/10.1016/j.carbon.2024.119933>

Sengokmen-Ozsoz, N., Aleemardani, M., Palanca, M., Hann, A., Reilly, G., Dall'Ara, E., & Claeysens, F. (2024). Fabrication of hierarchically porous trabecular bone replicas via 3D printing with high internal phase emulsions (HIPEs). *Biofabrication*, 17(1), 015012. <https://doi.org/10.1088/1758-5090/ad8b70>

Sengokmen-Ozsoz, N., Boston, R., and Claeysens, F. (2023). Investigating the potential of electroless nickel plating for fabricating ultra-porous metal-based lattice structures using PolyHIPE templates. *ACS Applied Materials and Interfaces*, 15(25), 30769-30779. <https://doi.org/10.1021/acsami.3c04637>

Sengokmen Ozsoz, N., Pashneh-Tala, S., and Claeysens, F. (2024). Optimization of a high internal phase emulsion-based resin for use in commercial vat photopolymerization additive manufacturing. *3D Printing and Additive Manufacturing*, 11(2), 496-507. <https://doi.org/10.1089/3dp.2022.0235>

Conference Proceedings and Meetings

Nihan Sengokmen-Ozsoz. Fabrication of Hierarchically Porous Polymers via Additive Manufacturing. IMEIT '25, Turkey

Nihan Sengokmen-Ozsoz, Rebecca Boston, and **Frederik Claeysens**. Additive manufacturing with high internal phase emulsion-based printing inks. ACS Fall 2024, US.

Nihan Sengokmen-Ozsoz and **Frederik Claeysens**. Metallized Ultraporous 3D Printed Lattices. 2023 MRS Spring Meeting, US.