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EDUCATION

2014-2019 **PhD**, Istanbul Technical University, Institute of Science, Chemistry
2010-2013 **MSc**, Istanbul Technical University, Institute of Science, Chemistry
2004-2009 **BSc**, Istanbul Technical University, Faculty of Science & Letters,
Chemistry
1999-2003 Dr. Kemal Naci Ekşi **High School**, Istanbul

WORK EXPERIENCE

2023- Assistant Professor, İstinye University, Istanbul, Turkey
2019- 2023 Postdoctoral Researcher, Sabanci University, Istanbul, Turkey

RESEARCH TOPICS

Postdoc: Functionalization of Gelatin, Collagen, Hyaluronic acid, Alginate, Carboxymethyl cellulose, and Chitosan and their 3D Bioprinting
PhD: Semi-Crystalline Hydrogels with Shape Memory and Self-Healing Functions.
MSc: Formation and Characterization of Hydrogels Containing Crystalline Domains.
BSc: Synthesis of pH-responsive Hydrogels and Investigation of These Hydrogels in a pH-oscillator.

AREAS OF EXPERTISE

- Polymers, Biopolymers, Hydrogels, Organogels, Cryogels

- Design of Smart Materials and Biomaterials
- Shape-Memory and Self-Healing functions of Polymeric biomaterials
- Mechanical, Thermal, Rheological and Morphological Characterizations of Polymeric Materials
- 3D Printing, Bioprinting

SKILLS

Language	Turkish, English
Software	Microsoft Office, Chem Office, Chem Draw, Sigma Plot, Origin, Peak Fit, Image Proplus, Pyris Data Analysis, EZ Omnic.
Machine	Rotational Rheometer Differential Scanning Calorimetry (DSC) Thermogravimetric Analysis (TGA) UV and FT-IR Spectrophotometers Universal Mechanical Test (UTM) Machines Scanning Electron Microscope (SEM) Confocal Laser Scanning Microscope (CLSM) Micro Computed Tomography (μ -CT) X-ray Diffraction (XRD) 3D printers

PUBLICATIONS

- [1]. Sezen, S., Bilici, C., Zarepour, A., Zarrabi, A., Mostafavi E., 2023, Mechanical Properties of Multifunctional Hydrogels, Book Chapter, *CRC Press, Taylor & Francis*, (under minor revision)
- [2]. Bilici, C., Altunbek, M., Afghah F., Koc, B., 2023, Embedded 3D Bioprinting of Hybrid GelMA Cryogel-based Scaffolds, *ACS Biomater Sci&Eng*, 9, 8, 5028-5038.
- [3]. Senturk, E., Bilici, C., Afghah F., Celik, S., Koc, B., 2023, 3D Bioprinting of Tyramine Modified Hydrogels Under Visible Light for Osteochondral Interface, *Biofabrication*, 15, 3, 034102.
- [4]. Tavsanlı, B., Bilici, C., Sungur, P., Ide, S., Okay, O. 2022, Butyl rubber as a macro-cross-linker in the preparation of a shape-memory and self-healing polymer, *Journal of Rheology*, 66, 6, 1367.
- [5]. Bilici, C., Tatar, A.G., Senturk, E., Dikyol, C., Koc, B., 2022, Bisulfite-initiated crosslinking of gelatin methacryloyl hydrogels for embedded 3D bioprinting, *Biofabrication*, 14, 2, 025011.
- [6]. Su, E., Bilici, C., Bayazit, G., Ide, S., Okay, O., 2021, Solvent-Free UV Polymerization of n-Octadecyl Acrylate in Butyl Rubber: A Simple Way to Produce Tough and Smart

Polymeric Materials at Ambient Temperature, *ACS Appl. Mater. Interfaces* 13, 21786–21799.

- [7]. Bilici, C., Karaarslan, D., Ide, S., Okay, O., 2018, Toughness Improvement and Anisotropy in Semicrystalline Hydrogels, *Polymer*, 151, 208-217.
- [8]. Bilici, C., Ide, S., Okay, O., 2017, Yielding Behavior of Tough Semicrystalline Hydrogels, *Macromolecules*, 50, 9, 3647-3654.
- [9]. Bilici, C., Can, V., Nochel, U., Behl, M., Lendlein, A. and Okay, O., 2016, Melt-Processable Shape-Memory Hydrogels with Self-Healing Ability of High Mechanical Strength, *Macromolecules*, 49, 19, 7442-7449.
- [10]. Bilici, C., Okay, O., 2013, Shape Memory Hydrogels via Micellar Copolymerization of Acrylic Acid and n-Octadecyl Acrylate in Aqueous Media, *Macromolecules*, 46, 8, 3125-3131.
- [11]. Bilici, C., Karayel, S., Demir, T. and Okay, O., 2010, Self-Oscillating pH-Responsive Cryogels as Possible Candidates of Soft Materials for Generating Mechanical Energy *Journal of Applied Polymer Science*, 118, 5, 2981-2988.

PATENTS

T.C. Patent (File no: 2019-GE-261637) "Production of self-healable and shape memory butyl rubber"

PROJECTS

- **Design of Hydrophobic Modified Hydrogels with Improved Mechanical Properties**, TUBITAK (The Scientific and Technological Research Council of Turkey) International Project, Scholarship Student (2010-2013)
- **Hydrogels Including Crystalline Domains**, ITU-SRP (Istanbul Technical University Scientific Research Project), Researcher (2012-2013)
- **Biocompatible and Functional Cryogels with Adjustable Mechanical Properties**, TUBITAK International Project, Scholarship Student (2013-2014)
- **Design of Biocompatible Hydrogels that Possess Different Chemical and Mechanical Properties**, TUBITAK International Project, Scholarship Student (2014-2017)

- **Semi-Crystalline Hydrogels with Shape-Memory and Self-Healing Functions**, ITU-SRP, Researcher (2017-2018)
- **Development of Personalized Vascular Grafts with Hydrogel-assisted 3D Bioprinting**, TUBITAK project, Sabanci University, Nanotechnology Research, and Application Center, Postdoctoral position (2019 - 2022)
- **Fabrication of Skin with Hair Follicle via Innovative 3D Hybrid Bioprinting Method**, TUBITAK project, Sabanci University, Nanotechnology Research, and Application Center, Postdoctoral position (2022 - 2023)

REFERENCES

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