*Taha Behroozi Kohlan* **Email: tahabk@kth.se** **Tel: (+46) 76-281-9217**

## EDUCATION

- Ph.D. in Polymer Technology
  - **KTH Royal Institute of Technology, Stockholm, Sweden**.

  **Nov.2021-Ongoing (expected date of graduation: Nov 2025)**

- M.Sc. in **Materials Science and Nano Engineering**
  - **Sabanci University, Istanbul, Turkey**.

    Overall GPA: **4.00 / 4.00**

- B.Sc. in **Chemical Engineering**
  - **Sharif University of Technology**, Tehran, Iran

    Overall GPA: **3.10 / 4.00** (15.28/ 20.00)

- High-school Diploma in Mathematics and Physics,
  - **Shahid Madani high school (NODET:** National Organization for Development of Exceptional Talents)

    Overall GPA: **4.00 / 4.00** (19.34/20)

## RESEARCH INTERESTS

- Polymer Synthesis and Characterization
- Responsive Materials Design
- Self-Healing and Active Coatings
- Natural Polymers and Hydrogels
- Composite Materials
- Biomaterials

## RESEARCH EXPERIENCES

- Stimuli-Responsive Dynamic Covalent Hydrogel for Tissue-Engineering Applications — Nov. 2021 – Ongoing

  KTH Royal Institute of Technology, Sweden
- Stimuli-Responsive Drug Delivery System — Nov. 2021 – Ongoing

  KTH Royal Institute of Technology, Sweden
- Investigation of Different Methods for Obtaining Latent Curing Agents with Functional Polymers for Thermosetting Resin Curing — Sep. 2019 – Nov. 2021

  Sabanci University Integrated Manufacturing Center, Istanbul, Turkey

  Composite Technologies Center of Excellence, Technopark Istanbul, Istanbul, Turkey
- Modification of Carbon-Based Materials with Responsive Polymers for Applications in Composite Manufacturing — Sep. 2019 – Nov.2021

  Sabanci University Integrated Manufacturing Center, Istanbul, Turkey

  Composite Technologies Center of Excellence, Technopark Istanbul, Istanbul, Turkey
- Synthesis and Application of Hollow Carbon Nano Spheres in Active Protective Film Coatings by Loading Green Inhibitors for Self-Healing Performance — Sep. 2016 – Jan.2018

  Sharif University of Technology, Tehran, Iran

## PUBLICATIONS

1. Seyyed Arash Haddadi, **Taha Behroozi Kohlan**, Sina Momeni, Ahmad Ramazani S.A., Mohammad Mahdavian. Synthesis and application of mesoporous carbon nanospheres containing walnut extract for fabrication of active protective epoxy coatings, **Progress in Organic Coatings**. Accepted April 2019. **Cited by 35**.
2. **Taha Behroozi Kohlan**, Asu Ece Atespare, Mehmet Yildiz, Yusuf Ziya Menceloglu, Serkan Unal, Bekir Dizman. Synthesis and Structure–Property Relationship of Amphiphilic Poly(2-ethyl-co-2-(alkyl/aryl)-2-oxazoline) Copolymers, **ACS Omega.** 26th of October 2022. **Cited by 2**.
3. Zeynep Munteha Sahin, **Taha Behroozi Kohlan**, Asu Ece Atespare, Mehmet Yildiz, Serkan Unal, Bekir Dizman. Polyoxazoline-modified graphene oxides with improved water and epoxy resin dispersibility

and stability towards composite applications, **Journal of Applied Polymer Science.** 25th of March 2022. **Cited by 4**.

4. Balakondareddy Sana, Nancy Ferrentino, **Taha Behroozi Kohlan**, Yaqun Liu, Valdas Pasiskevicius, Anna Finne-Wistrand, Daniela Pappalardo. Coumarin end-capped poly(ε-caprolactone)-poly(ethylene glycol) tri-block copolymer: synthesis, characterization and light-response behavior, **European Polymer Journal.** 19th January 2023. **Cited by 2**.
5. **Taha Behroozi Kohlan**, Asu Ece Atespare, Mehmet Yildiz, Yusuf Ziya Menceloglu, Serkan Unal, Bekir Dizman. Amphiphilic Polyoxazoline Copolymer-Imidazole Complexes as Tailorable Thermal Latent Curing Agents for One-Component Epoxy Resins. **ACS Omega**, November 30, 2023
6. Asu Ece Atespare, **Taha Behroozi Kohlan**, Mehmet Yildiz, Yusuf Ziya Menceloglu, Serkan Unal, Bekir Dizman.Poly(2-alkyl/aryl-2-oxazoline) Homopolymers As Building Blocks for Thermal Latent Curing Agents: Synthesis and Structure-Property Relationship, Submitted (Aug 2023)
7. **Taha Behroozi Kohlan,** Anna Finne Wistrand. Dynamic self-healing hyaluronic acid hydrogels based on Schiff base chemistry (Manuscript)
8. Tove Kivijarvi, **Taha Behroozi Kohlan**, Anna Finne Wistrand. Encoding tunable degradability through photopatterning and complimentary labile bond chemistry (Manuscript)

## PATENTS

1. Bekir Dizman, Serkan Unal, Yusuf Ziya Menceloglu, Mehmet Yildiz, **Taha Behroozi Kohlan**, Asu Ece Atespare. Polyoxazoline based thermal latent curing agents for thermoset resins, WO2023086039A1

## CONFERENCES

1. **Taha Behroozi Kohlan**, Tove Kivijarvi, Anna Finne Wistrand. "Dynamic Covalent Hydrogels with Tunable Time-Dependent Mechanical Properties". (Poster presentation -*Won a poster prize)*
   Dynamic Polymer Networks conference, Bertinoro, Italy. May 2023
2. **Taha Behroozi Kohlan**, Asu Ece Atespare, Zeynep Munteha Sahin, Bekir Dizman. "Synthesis and Characterization of a Range of Oxazoline Monomers and Copolymers"
   32nd National Chemistry Congress, Turkey (Oral presentation)
3. Asu Ece Atespare, **Taha Behroozi Kohlan**, Zeynep Munteha Sahin, Bekir Dizman. "Synthesis and Characterization of a Range of Oxazoline Monomers and Homopolymers"
   32nd National Chemistry Congress, Turkey (Oral presentation)
4. Bekir Dizman, **Taha Behroozi Kohlan**, Asu Ece Atespare, Zeynep Munteha Sahin. ''Polyoxazolines: A review of their synthesis, properties, and applications''
   32nd National Chemistry Congress, Turkey (Oral presentation)
5. Sina Momeni, **Taha Behroozi Kohlan**, Seyyed Arash Haddadi, Ahmad Ramazani S.A. "Synthesis and Application of Carbon Nanospheres containing Walnut Extract (Green Inhibitor) in Fabrication of Active Epoxy Coatings"
   8th International Conference on Nanotechnology (ICN 2018), Istanbul, Turkey. (Oral presentation)

## EXPERIMENTAL SKILLS

- Polymer Synthesis
  - Multistep Small Molecule Synthesis and Purification
  - Polymer Synthesis and Purification
    - Free Radical Polymerization
    - Controlled Ring Opening Polymerization
    - Condensation Polymerization
    - Extremely Low PDI Polymer Synthesis
    - Functional Materials Design
    - Scalable Polymer Synthesis
- Nanomaterial Synthesis
- Preliminary cell studies
- Characterization
  - Nuclear Magnetic Resonance (NMR) spectroscopy
  - Fourier-Transform Infrared Spectroscopy (FTIR)

- Scanning Electron Microscopy (SEM)
- Transmission Electron Microscopy (TEM)
- Size-Exclusion Chromatography (SEC)
- Matrix-Assisted Laser Desorption/Ionization (MALDI)
- Differential Scanning Calorimetry (DSC)
- High Pressure Differential Scanning Calorimetry (HP-DSC)
  - Instrument responsible (Feb 2021- Nov 2021)
- Thermogravimetric Analysis (TGA)
- Rheology
  - Instrument responsible (Feb 2023-Ongoing)
- Karl Fischer Titration
- Brunauer-Emmett-Teller (BET)
- Electrochemical Impedance Spectroscopy (EIS)
- X-ray diffraction analysis (XRD)
- UV-Vis and fluorescent spectroscopy
- Dynamic Light Scattering (DLS)

## PROGRAMMING And COMPUTER BASED SKILLS

- Python
- MATLAB

## TEACHING EXPERIENCES

| | |
|---|---|
| • Research School for high school students (Forskarskolan) | Summer 2023 |
| • Lab Assistant, Polymer materials | Spring 2023 |
| • Lab Assistant, Polymeric materials: Structure and Properties | Spring 2023 |
| • Supervision of BSc students in their thesis | Spring 2022 |
| • Supervision of MSc students | Spring 2023 |
| • Teaching Assistant, Analytic Chemistry | Spring 2020 |
| • Teaching Assistant, Polymer Synthesis | Spring 2021 |

## LANGUAGES

- TOEFL (1. Dec.2018, Expired): 112/120

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| Reading: 29/30 | Listening: 29/30 | Speaking: 26/30 | Writing: 28/30 |

Azeri: Native — Persian: Native

Turkish: Fluent — Swedish: Basic

## HONORS And AWARDS

- Won a poster prize- Dynamic Polymer Networks conference at Bertinoro, Italy. May 2023
- Fully Funded Research Assistant Scholarship - TUBITAK (Scientific and Technological Research Council of Turkey)
- Full Scholarship - Sabanci University
- Ranked 1st in Environmentally Friendly Inventions, Innovative Ideas, and Inventions and Patents - 11th and 12th National festival of Harekat
- Ranked in Top 10 Participants of Sharif Chemical Engineering Computer - Aided Contest (SC3) among 60 Teams from Nationwide Universities - Sharif University of Technology
- Full Scholarship - Sharif University of Technology
- Ranked 269th among over 300.000 Participants of Nationwide University Entrance Exam (Earned Admission to Sharif University of Technology)

## REFERENCES

1. **Prof. Anna Finne Wistrand**, Professor, KTH Royal Institute of Technology. annaf@kth.se
2. **Assoc. Prof. Bekir Dizman**, Associate Professor, Sabanci University. bekir.dizman@sabanciuniv.edu
3. **Prof. Minna Hakkarainen,** Professor, KTH Royal Institute of Technology. minna@kth.se
4. **Dr. Seyyed Arash Haddadi,** Researcher, University of British Columbia. Seyyedarash.haddadi@ubc.ca