

Elif YILMAZ

Sarıyer / İstanbul

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EDUCATION

- **Ph.D. in Chemistry**, Istanbul Technical University, Graduate School in Chemistry | *July 2025-present*
- **M.Sc. in Chemistry**, Istanbul Technical University, Graduate School in Chemistry | *May 2025*
- **B.Sc. in Chemistry**, Yildiz Technical University, Faculty of Science and Letters | İstanbul University, Faculty of Science (YÖK TEBİP Program) | *August 2022*

EXPERIENCES

- **Research Assistant**, Department of Chemistry, Faculty of Engineering and Natural Sciences | *2024-present*
 - Assisted in undergraduate laboratory courses:
 - *Organic Chemistry I–II (2024-2025)*
 - *Inorganic Chemistry (2024)*
 - *Analytical Chemistry (2024)*
 - *General Chemistry (2025)*
 - *Physical Chemistry (2025)*
 - *Instrumental Analysis I-II (2024-2025)*

RESEARCH INTERESTS

- Design of rhodamine-based colorimetric and fluorimetric probes for metal ion detection
- Smartphone-based, on-site sensing systems
- Spectroscopic and electrochemical analysis methods
- Molecular approaches in organic, inorganic, and analytical chemistry
- Chemical sensing for environmental and biological analysis

THESIS

- **Master Thesis:** Development Of A Novel Multi-Channel Mercury(II) Sensor Based On Chromenylum-Cyanine Modified With Thiazole-Ferrocene.
- **Graduation Project Thesis:** Iron(III) Ion-Selective Rhodamine-Based Chemical Sensors.

PUBLICATIONS

- Çolak, Ü., Yılmaz, E., Durmazel S., Can K., Üzer A., Apak R.. *Indicator displacement-based colorimetric assay for dibutyl phthalate in pharmaceutical products with titanium(IV)-pyridylazo resorcinol (PAR)*, Journal of Pharmaceutical and Biomedical Analysis, Volume 248, 024, 116323, ISSN 0731-7085, <https://doi.org/10.1016/j.jpba.2024.116323>.

CONFERENCE CONTRIBUTIONS

- *Colorimetric determination of dibutyl phthalate in pharmaceutical preparations via indicator displacement-based Ti(IV)-pyridylazo resorcinol method.* 6th Trace Element Analysis Congress, Manisa Celal Bayar University, Manisa, Turkey, September 5–8, 2024.

- *Development of a New Hg²⁺ Sensor Based on Thiazole-Ferrocene Modified Chromenilium-Cyanine Platform with Multichannel Detection.* IXth National Inorganic Chemistry Congress, May 16–19, 2024.
- *Development of a New Mercury (II) Ion Selective Chromenilium-Cyanine Based Fluorescent Sensor.* IXth National Inorganic Chemistry Congress, May 16–19, 2024.
- *Development of a New Mercury (II) Ion Selective, Chromenilium-Cyanine Based Turn-On Fluorescent Sensor Modified with Mercapto Propionic Acid.* 2nd International Graduate Research Symposium (IGRS'23), May 16–18, 2023.

PROJECTS

- **TUBITAK 2209-A** - Development of a Simple Colorimetric Sensor for the Detection of Phthalates.
- **TUBITAK ARDEB 1001**, Development of New Mercury (II)-Chemodosimeters with Indoline Ring-Containing Chromelium-Cyanine Based and High Selectivity /Sensitivity: Real Sample, Paper Strip, Smartphone and Intra-Cellular Applications.
- **ITU YAP**, Development of New Chromelium-Cyanine Based Probes Containing Different Receptors and Carbonyl Function for the Selective, Sensitive and Easy Analysis of Hg²⁺ Ion in Environmental and Biological Environments.

HONORS, AWARDS, SCHOLARSHIPS

- **TÜBİTAK 1001**, *Scientific and Technological Research Projects Support Program* (Sep.2023 – ongoing).
- **ITU Scientific Research Projects**, *Thematic Competence Area Project*, (Feb. 2024 – ongoing).
- **TÜBİTAK 2210-A**, *General Domestic Master's Scholarship Program* (Sepy.2022- Sep. 2024).
- **TÜBİTAK 2209-A** *University Students Research Projects Support Program* (Nov. 2021 – Sep. 2023).
- **Council of Higher Education (YÖK)**, *Outstanding Achievement Program in Basic Sciences*, Awarded for academic excellence in undergraduate studies (Sept 2018-July 2022).

INTERNSHIPS

- **Istanbul University - Cerrahpaşa**, Department of Analytical Chemistry, *Advanced Analytical Chemistry & Antioxidant Research Laboratory*.

SKILLS

Computer Skills:

- Microsoft Office Programs
- ChemDraw
- ChemSketch
- Mestrelab Mnova NMR
- Origin

Language Skills

- Turkish (native)
- English (advanced)