

# Arda Baran Burçak

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## Education

- 2018–2024 **Koç University, Istanbul, Turkey, B.Sc., Chemistry.**  
Full Merit Scholarship
- 2019–2024 **Koç University, Istanbul, Turkey, B.Sc., Computer Engineering (Double Major).**
- 2013–2018 **Cağaloğlu Anatolian High School, Istanbul, Turkey, High School.**

## Experience

- Sep 2023 – **Project Mobility Student, KOVALENKO LAB, ETH ZURICH, Zurich.**  
Present Working on Synthesis and Characterization of Hybrid Perovskite Single Crystals for Application in Ionizing Radiation Detection
- Sep 2019 – **Undergraduate Researcher, KUBAM, KOÇ UNIVERSITY, Istanbul.**  
Present Working on the project "Development of Innovative Thermoelectric Coolers for Avionics Applications" funded by Turkish Aerospace Industries  
Working independently on synthesis, characterization and doping of III-V thermoelectric compounds such as InSb and GaSb to optimize their properties  
Worked with graduate students on multiple projects, synthesized, characterized and doped several thermoelectric materials such as MgAgSb, NbCoSn, Cu<sub>2</sub>Se, YNiBi, SmZnSbO using various methods
- Fall 2022 **Teaching Assistant, CHEM 101, KOÇ UNIVERSITY, Istanbul.**  
Conducting problem sessions for the course "General Chemistry I (CHEM 101)" to provide practical experience and enhance the understanding of the students
- Jul 2022 – **Visiting Researcher, MAX PLANCK INSTITUTE FOR CHEMICAL PHYSICS OF SOLIDS, Dresden.**  
Sep 2022 Worked on the synthesis and characterization of InSb and studied various doping options to enhance its thermoelectric properties
- Aug 2021 **Software Development Intern, AKTEK, Istanbul.**  
Designed and worked on a mobile app using Node.js and AWS for logging espresso brewing inputs and outputs to obtain optimal and reproducible extraction yields

## Skills

- Languages English, German, Turkish
- Software Python, Java, C, MATLAB, Node.js, WinCSD, WinXPow, Netzsch Proteus, MS Office
- Experimental Glovebox, XRD, ZEM-3, LFA, SPS, Single Crystal XRD, Laue Camera, Bridgman Furnace, Thermal Evaporation, High Energy Ball Mill, Chamber and Vertical Furnaces with Gas Flow, Quartz Sealing, Induction Furnace, Arc-Melting for Reactions and Crucible Preparation, Optical Microscopy, DSC, DTA/TG
- Other Audio production, Photography

## Awards&Scholarships

TÜBİTAK 2205 Scholar, Vehbi Koç Scholar

## Extra Curricular

- 2022 – **Founder&President, Koç University Cycling Society.**  
Present
- 2018 –2019 **Member, Koç University Music Club.**
- 2016–2017 **President, Cağaloğlu Anatolian High School Music Club.**