

Fuat ERDEN

ferden@u.nus.edu | fuaterden@sivas.edu.tr

Education

- 2018 **PhD**, Materials Science and Engineering, **National University of Singapore**
Thesis Title: Polyaniline Composites as Thermoelectric Materials
- 2013 **MSc**, Metallurgical and Materials Engineering, **Middle East Technical University**
Thesis Title: In-Situ Formation of Mg-Ni Intermetallics
- 2010 **BSc**, Metallurgical and Materials Engineering, **Middle East Technical University**

Employment

- Feb 2020 – Present **Department Chair, Sivas University of Science and Technology**
Department of Aeronautical Engineering
- Dec 2019 – Present **Assistant Professor, Sivas University of Science and Technology**
Department of Aeronautical Engineering
- Jan 2019 – Dec 2019 **Technology Development Engineer, Turkish Aerospace Industries**
Advanced Material, Process and Energy Technology Center
- Oct 2010 – June 2013 **Research/Teaching Assistant, Middle East Technical University**
Department of Metallurgical and Materials Engineering
- Sept 2010 – Oct 2010 **Metallurgical Engineer, MEGAP Ltd**
Electrochemistry (R&D)
- July 2009 – Aug 2009 **Intern, MEGAP Ltd**
- July 2008 – Aug 2008 **Intern, Turkish Aerospace Industries**

Teaching Experience

- Dec 2019 – Present **Sivas University of Science and Technology**
Graduate Modules: Thermoelectric Effect and Its Applications
- Jan 2014 – June 2015 **National University of Singapore**
Undergraduate Modules (Lab Demonstrator): Solar Cells, PEM Fuel Cells
- Oct 2010 – June 2013 **Middle East Technical University**
Graduate Modules (Teaching Assistant): Thermodynamics of Materials
Undergraduate Modules (Teaching Assistant): Thermodynamics of Materials I-II, Materials Laboratory, Materials Characterization, Chemical Metallurgy II, Computer Applications in Metallurgy

Awards

- 2013 – 2017 **Singapore International Graduate Award (SINGA), Full Ph.D. Scholarship**
- 2011 **METU Graduate Performance Award, Rank 1 M.Sc. student with 4.00/4.00 GPA**
- 2009 – 2010 **METU High Honour Roll**
- 2007 – 2009 **METU Honour Roll**

Service to the Profession

- May 2019 – Present **Referee**, The Scientific and Technological Research Council of Turkey (TUBITAK)/Technology and Innovation Grant Programs Directorate (TEYDEB) Projects

Projects

- Oct 2010 – June 2011 **Scholar**, TUBITAK 1001 Project: Formation of Si and Si based Compounds by Electrodeoxidation Technique, Total Project Budget: 72,850 Euro, Funded by: The Scientific and Technological Research Council of Turkey (TUBITAK)

Publications

A. PATENTS

1. **Fuat Erden**, Ishak Karakaya, Metehan Erdogan. 2016. Combination of Electrodeoxidation and Molten Salt Electrolysis Methods for Intermetallic and/or Alloy Production. Patent No: TR 2014 00410 B, **Turkish Patent Institute**, Turkey.

B. PAPERS IN PEER-REVIEWED JOURNALS

2. Nursev Erdogan, **Fuat Erden**, Aziz T Astarlioglu, Mehtap Ozdemir, Salih Ozbay, Gulnur Aygun, Lutfi Ozyuzer. 2020. ITO/Au/ITO multilayer thin films on transparent polycarbonate with enhanced EMI shielding properties. **Curr Appl Phys**, 20, 489-497.
3. Tao Tang, Tingting Lin, **Fuat Erden**, Fuke Wang, He Chaobin. 2018. Configurations Dependent Optical Properties and Acid Susceptibility of Azulene Compounds. **J Mater Chem C**, 6, 5153-5160.
4. **Fuat Erden**, Hui Li, Xizu Wang, Fuke Wang, He Chaobin. 2018. High-Performance Thermoelectric Materials Based on the Ternary TiO₂/CNT/PANI Composites. **Phys Chem Chem Phys**, 20, 9411-9418.
5. Hui Li, Xuehong Lu, Du Yuan, Jiaotong Sun, **Fuat Erden**, Fuke Wang, He Chaobin. 2017. Lightweight flexible carbon nanotube/polyaniline films with outstanding EMI shielding properties. **J Mater Chem C**, 5, 8694-8698.
6. **Fuat Erden**, Szu Cheng Lai, Hong Chi, Fuke Wang, He Chaobin. 2017. Tailoring the Diameters of Polyaniline Nanofibers for Sensor Application. **ACS Omega**, 2, 6506-6513.
7. **Fuat Erden**, Ishak Karakaya, Metehan Erdogan. 2014. On the preparation of Mg₂Ni by Combining Electrodeoxidation and Electrolysis Techniques. **Int J Electrochem Sci**, 9, 6627-6639.

C. CONFERENCE PROCEEDINGS

8. **Fuat Erden**, Ishak Karakaya, Metehan Erdogan. 2014. An Interrupted In-situ Method for Electrochemical Formation of Mg-Ni Intermetallics. TMS 2014 Annual Meeting and Exhibition. **Energy Technology 2014: Carbon Dioxide Management and Other Technologies**, 259-269.
9. **Fuat Erden**, Ishak Karakaya, Metehan Erdogan. 2012. Electrochemical Formation of Mg₂Ni in MgCl₂ Containing Electrolyte. IMM16. **Non-ferrous Metallurgy**, 711-719.
10. Emre Ergul, Ishak Karakaya, Metehan Erdohan, **Fuat Erden**. 2012. An Investigation into the Electrochemical Production of Si by the FFC Cambridge Process. TMS 2012 Annual Meeting and Exhibition, **2012 EPD Congress**, 455-462.

D. CONFERENCE ABSTRACTS

11. Nursev Erdogan, Aziz T Astarlioglu, Salih Ozbay, **Fuat Erden**, Remzi Ecmel Ece, Mehtap Ozdemir, Gulnur Aygun, Lutfi Ozyuzer. 2019. Transparent and Conductive ITO/Au/ITO Multilayer Thin Films with Enhanced EMI Shielding Properties. **AAAFM International Conference on Functional Materials for Industrial Revolution**, Abstract ID: 713.
12. **Fuat Erden**, Ishak Karakaya, Metehan Erdogan. 2011. A Potential Method for Producing Mg₂Ni as Hydrogen Storage Alloy. **International Conference on Hydrogen Production (ICH2P11)**, Paper No: 137STO.

Outreach and Other Activities

- **Chess**: Licensed Chess Player (2016 – present) FIDE World Chess Federation ID: 145216001.
- **Singapore Turkey Friendship Association (STFA)**: Member (2014 – 2017) Attended many charity and social activities (i.e. Chingay 2015 – SG50 as a Group Leader/Choreographer/Trainer/Dancer of STFA).
- **UCTEA Chamber of Metallurgical and Materials Engineers**: Member (2010 – present).
- **Public Success Program in Turkey**: Member, Coach and Group Leader (2007 – 2008) This program aims to teach democracy to children by encouraging them to involve in team activities.
- **Electric/Classic Guitar**: Guitarist (2001 – present) Performed on stage in many activities and concerts.
- **Folk Dance**: Professional Dancer/ Coach (1997 – 2004) Performed on stage in 10 different countries. Earned the title World Champions (best technical dance) in 2000.
- **Ice Skating**: Professional Ice Skater (1990 – 1996) Earned the title Turkey Champions (Men, 6c) in 1995.