

# CURRICULUM VITAE

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Degree	Department	University	Year
BSc	Chemistry	Ankara University	June 2008
MSc	Chemistry	Akdeniz University	January 2011
PhD	Chemistry	Hacettepe University	December 2016

## Professional Experiences

	Department	University	Date
Res. Assist.	Chemistry.....	Akdeniz University.....	February 2009
Res. Assist.	Chemistry.....	Hacettepe University.....	December 2010
Assist. Prof. Dr.	Chemistry.....	Hacettepe University.....	December 2019

## MSc Thesis

“The investigation of adsorption and electrosorption of metal ions from aqueous solutions onto activated carbon cloth by using ion selective electrodes”

## PhD Thesis

“Electrochemical preparation and characterization of TiO<sub>x</sub> films in nonaqueous media”

## Scientific Publications

### A. Manuscripts Published in the Journal or Books placed in Science Citation Index, SCI

1. **Ertekin Z.**, Pekmez N.Ö., Pekmez K., One-step electrochemical deposition of thin film titanium suboxide in basic titanyl sulfate solution at room temperature, *Journal of Solid State Electrochemistry* 24:975–986, (2020).
2. Elkhidr H. E., **Ertekin Z.**, Udum Y.A., Pekmez K., Electrosynthesis and characterizations of electrochromic and soluble polymer films based on N- substituted carbazole derivates, *Synthetic Metals*, 260, 116253, (2020).
3. Ozer D., **Ertekin Z.**, Pekmez K., Oztas N. A., Fuel effects on  $\text{Li}_2\text{CuP}_2\text{O}_7$  synthesized by solution combustion method for lithium-ion batteries, *Ceramics International*, 45, 4, 4626-4630 (2019).
4. **Ertekin Z.**, Pekmez K., Ekmekçi Z., Evaluation of collector adsorption by electrochemical impedance spectroscopy. *International Journal of Mineral Processing*, 154, 16-23 (2016).
5. **Ertekin Z.**, Uğur T., Pekmez K., Cathodic electrochemical deposition of Magnéli phases  $\text{Ti}_n\text{O}_{2n-1}$  thin films at different temperatures in acetonitrile solution. *Electrochimica Acta*, 163, 77-81 (2015).
6. **Gökdağ Z.**, Yumak T., Sınağ A., Comparison of the catalytic efficiency of synthesized nano tin oxide particles and various catalysts for the pyrolysis of hazelnut Shell, *Biomass and Bioenergy*, 34, 402-410 (2010).

### B. Presented in International Symposium

1. Pekmez K., **Gökdağ Z.**, Tamer U., Electrochemical deposition of  $\text{Ti}_3\text{O}_5$  film in nonaqueous acetonitrile solution, 5<sup>th</sup> Gerischer-Symposium. Photoelectrochemistry from Fundamentals to Solar Applications, Berlin-Germany, June 2011. (Poster presentation)

2. **Ertekin Z.**, Pekmez K., Cathodic electrochemical deposition of TiO<sub>x</sub> thin films at different temperatures in nonaqueous acetonitrile solution. ISE Satelling Meeting Spectroelectrochemistry 2012 Dresden, August 2012. (Oral presentation)
3. Ayrancı E., **Ertekin Z.**, Bayram E., Investigation of adsorption and electrosorption of metal ions from aqueous solutions onto activated carbon cloth using ion selective electrodes and ICP spectroscopy, the XVII European Conference on Analytical Chemistry, EUROANALYSIS 2013, Warsaw-Poland, August 2013. (Poster presentation)
4. **Ertekin Z.**, Pekmez K., Ekmekçi Z., Surface characterization of Pyrite using electrochemical techniques, XIV.INTERNATIONAL MINERAL PROCESSING SYMPOSIUM AND EXHIBITION, IMPS 2014, Kuşadası-Turkey, October 2014. (Oral presentation).
5. **Ertekin Z.**, Pekmez K., A simple method of TiO<sub>x</sub> thin film electrodeposition from basic titanyl sulfate solution, 11th International Symposium on Electrochemical Micro & Nanosystem Technologies (EMNT2016), Brussels-Belgium, August 2016 (Oral presentation).
6. **Ertekin Z.**, Pekmez K., Characterization of electrosynthesized coloured TiO<sub>x</sub> thin films electrodes, 67th Annual Meeting of the International Society of Electrochemistry, Hague-Netherlands, August 2016 (Poster presentation).
7. **Ertekin Z.**, Pekmez K., Ekmekçi Z., Pirit Oksidasyonunun Elektrokimyasal Yöntemlerle İncelenmesi, 29. Ulusal Kimya Kongresi, Ankara- Turkey, 10-14 September 2017 (Oral Presentation).
8. **Ertekin Z.**, Pekmez K., Ekmekçi Z., Use of EIS to investigate of adsorption of NaCN and Na<sub>2</sub>S<sub>2</sub>O<sub>5</sub> on pyrite, 10<sup>th</sup> International Conference on Instrumental Methods of Analysis: Modern Trends and Applications, Heraklion-Greece, 17-21 September 2017 (Oral Presentation)
9. Özer D., **Ertekin Z.**, Altuntas Ö.N., Pekmez K., Solution Combustion Synthesis of Lithium Copper Pyrophosphate for Lithium-ion Batteries, The International Conference on Materials Science Mechanical and Automotive Engineerings and Technology (IMSMATEC'18), İzmir-Turkey, 10-12 April 2018 (Oral Presentation).
10. **Ertekin Z.**, Pekmez Ö.N., Pekmez K., Electrochemical Impedance Spectroscopy Study of Ti<sub>n</sub>O<sub>2n-1</sub> thin films in basic medium, Science and Applications of Thin Films, Conference & Exhibition (SATF 2018) Izmir Institute of Technology., Izmir, Turkey, September 17-21 September 2018 (Oral Presentation).
11. Uğur M., **Ertekin Z.**, Karaca E., Özçicek N., Pekmez K., Impedance Spectroscopy Characterisation of Titanium Sub-oxide Films on Different Electrode Materials, 5th

International Conference on Material Science and Nanotechnology for Next Generation, Nevşehir, Turkey 4-6 October 2018 (Poster presentation).

**12.** Karaca E., Uğur M., **Ertekin Z.**, Özçicek N., Pekmez K., Characterization of Magneli phase titanium suboxides thin films prepared by electrodeposition technique, 5th International Conference on Material Science and Nanotechnology for Next Generation, Nevşehir, Turkey 4-6 October 2018 (Poster presentation).

**13.** **Ertekin Z.**, Pekmez K., Can M., Ekmekçi Z., Electrochemical detection of thiosulfate in the presence of sulfate ion using stainless steel electrode modified by gold, Flotation'19, Cape Town-Güney Afrika, 11-14 Ekim 2019 (Oral Presentation).

**14.** **Ertekin Z.**, Udum Y.U., Elkhidr H.E., Pekmez K., Comparison of polycarbazole films bearing carboxylic acid and cyanoethyl for optoelectronic applications, Electrochemistry Conference-2019, Istanbul, Türkiye, 30 Eylül-02 Ekim 2019 (Oral Presentation).

### Projects

1. The Scientific and Technological Research Council of Turkey (TUBITAK 1001) – Investigation of conversions of various biomasses to valuable chemicals by pyrolysis and hydrothermal treatment- Researcher- (10/2008- 02/2009)
2. Newmont Mining Corporation- Use of electrochemical methods for surface characterization of carlin and verde pyrite samples- Researcher- (03/2013-12/2013)
3. Hacettepe University, Scientific Research Division – Electrochemical preparation, characterization and investigation of photovoltaic properties of TiO<sub>x</sub> films in nonaqueous media – Researcher (04/2014 -10/2015)
4. Hacettepe University, Scientific Research Division- Electrochemical deposition of titanium sub-oxide thin films in acetonitrile solution on different electrode materials- Principal Investigator (11/2017-09/2018)
5. European Union's Horizon 2020, Interagted mineral technologies for more sustainable raw material supply, Researcher (09/2017, ---) Proje No: 730480
6. National Boron Research Institute (BOREN), Synthesis of Nano-Manganese oxyborate for energy-focused applications, Researcher, (12/2018, ----)

### Awards & Scholarships

1. Ghent University, Belgium- Exchange student- 09/2006 – 02/2007 (ERASMUS programme)

2. Pfizer Analytical Research Centre , Belgium- Exchange student 23/07/2007 - 24/10/2007 (Leonardo da Vinci programme)
3. RWTH Aachen University, Institute of Semiconductor Electronics, Germany- Guest researcher 09.06.2014 – 10.10.2014
4. The Scientific and Technological Research Council of Turkey (TUBITAK 2211-C): National PhD Scholarship Programme 11/2013- 05/2016
5. Aalto University, Helsinki-Finland, Guest Researcher, 10.08.2019 – 18.08.2019

### **Teaching Experiences:**

1. General Chemistry Laboratory
2. Analytical Chemistry Laboratory I (Qualitative analysis)
3. Analytical Chemistry Laboratory II (Quantitative analysis)
4. Instrumental Analysis Laboratory

### **Research fields:**

Electroanalytical Chemistry, Photovoltaics, Lithium ion batteries, Electrochemical Impedance measurement, Ion-selective Electrode, Electrochromic polymer films

### **Technical Skills:**

- Metrohm Autolab Potentiostat/Galvanostat
- CH Instruments Electrochemical Analyzer Model 6011D, USA
- Gamry Reference 600 Potentiostat/Galvanostat
- X-ray diffraction (XRD) RIGAKU MINI FLEX II
- Raman Spectrometer (i-Raman 785, BwTek Inc.)
- UV–vis NIR spectrophotometer, Perkin Elmer.
- FTIR Spectrometer, Thermo Scientific

### **Courses & Summer Schools**

1. Electrochemical Impedance Spectroscopy Workshop, April 2012, Ankara
2. Tübitak-BİDEB 2237 Project Education Activity for PhD students, January 2013, Ankara