

Prof. MEHMET KADRİ AYDINOL

Personal Information

Office Phone: [+90 312 210 2523](tel:+903122102523)

Email: kadri@metu.edu.tr

Web: <https://avesis.metu.edu.tr/kadri>

International Researcher IDs

ScholarID: 4dNR5-QAAAAJ

ORCID: 0000-0003-3858-9343

Publons / Web Of Science ResearcherID: A-5013-2010

ScopusID: 6603913861

Yoksis Researcher ID: 5170

Education Information

1991 - 1994	Doctorate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Metalurji Ve Malzeme Mühendisliği (Y) (Tezli), Turkey
1989 - 1991	Postgraduate, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, Turkey
1984 - 1989	Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, Turkey

Foreign Languages

English, C1 Advanced

Research Areas

Corrosion and Corrosion Protection, Physical Metallurgy, Material Characterization, Nanomaterials

Academic Titles / Tasks

2007 - Continues	Professor, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering
2001 - 2007	Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering
1998 - 2001	Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering

Academic and Administrative Experience

2003 - 2012	Deputy Head of Department, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering
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Courses

2022 - 2023

Energy Storage Devices, Undergraduate

Supervised Theses

- 2022 AYDINOL M. K., Doctorate, C.SAVAŞ(Student), Development and characterization of sulfide based active materials for electrochemical applications
- 2022 AYDINOL M. K., Postgraduate, F.TEKMANLI(Student), Optimization of nickel, cobalt and lithium recovery processes from spent Li-ion batteries
- 2022 AYDINOL M. K., Postgraduate, D.BAHTIYAR(Student), Development of borides/borates for energy storage devices
- 2022 AYDINOL M. K., Postgraduate, M.ALP(Student), Ni-rich $\text{LiNi}_x\text{Mn}_y\text{Co}_z\text{MvO}_2$ ($x>0.6$) cathode material development for Li-ion batteries
- 2022 AYDINOL M. K., Postgraduate, E.ERKİN(Student), Development of cathode materials for li-ion batteries by sputter deposition
- 2018 AYDINOL M. K., Postgraduate, E.YILMAZ(Student), Development and characterization of tin based anode materials for Li-ion batteries
- 2018 AYDINOL M. K., Doctorate, B.PİŞKİN(Student), Development and characterization of new layered cathode materials for lithium ion batteries
- 2017 AYDINOL M. K., Postgraduate, C.Savaş(Student), Ultrasonic sound assisted processing and characterization of Li-(Ni-Co-Al) oxide as cathode active material for Li-Ion Batteries
- 2017 AYDINOL M. K., Postgraduate, C.SAVAŞ(Student), Ultrasonic sound assisted processing and characterization of Li-(Ni-Co-Al) oxide as cathode active material for Li-ion batteries
- 2017 AYDINOL M. K., Postgraduate, K.ÖZGÜN(Student), Investigation of structural and electrochemical properties of biomass based activated carbon materials for energy storage applications
- 2017 AYDINOL M. K., PARLAK M., Doctorate, B.MİSER(Student), Production and characterization of carbon-silicon nanocomposite anode materials for secondary lithium batteries
- 2016 AYDINOL M. K., Postgraduate, B.KAYGUSUZ(Student), Development and characterization of tungstates and molybdates for li-ion batteries
- 2015 EVİS Z., AYDINOL M. K., Doctorate, Ş.DOĞU(Student), Development and characterization of high power density cathode materials for lithium-ion batteries
- 2014 AYDINOL M. K., Postgraduate, E.Camcı(Student), Hydrothermal synthesis and characterization of LiMnPO_4 for secondary lithium batteries /
- 2014 AYDINOL M. K., Postgraduate, E.CAMCI(Student), Hydrothermal synthesis and characterization of LiMnPO_4 for secondary lithium batteries
- 2014 AYDINOL M. K., Postgraduate, S.HADDADIAN(Student), Morphological evolution of strained isotropic thin solid film on rigid substrate /
- 2013 AYDINOL M. K., NALBANT ESENTÜRK E., Postgraduate, Ö.ÖYKÜM(Student), Production and characterization of nano silver oxide for silver zinc batteries
- 2013 AYDINOL M. K., Doctorate, A.BÜYÜKBURÇ(Student), Development and characterization of high energy cathode materials for lithium-ion batteries
- 2012 AYDINOL M. K., Postgraduate, O.Muşan(Student), Production and characterization of $\text{CaNi}_2\text{-xM}_x$ compounds for metal hydride batteries
- 2012 AYDINOL M. K., Postgraduate, B.ÖKSÜZ(Student), Production and characterization of CaNi_2 compounds for metal hydride batteries
- 2012 AYDINOL M. K., Postgraduate, O.MUĞAN(Student), Ab ? initio development of Ca-Ni based alloys for metal hydride batteries
- 2012 AYDINOL M. K., ERKOÇ Ş., Postgraduate, A.İNCE(Student), Investigation of the structural properties of silicene nanoribbons by molecular dynamics simulations

2011	AYDINOL M. K., Doctorate, A.ÇELİK(Student), Investigation of electromigration and stress induced surface dynamics on the interconnect by computer simulation
2010	AYDINOL M. K., Doctorate, Ö.AKYILDIZ(Student), Computer simulation of grain boundary grooving by anisotropic surface drift diffusion due to capillary, electromigration and elastostatic forces
2010	AYDINOL M. K., Postgraduate, Ş.HALICI(Student), Development of lead alloys for valve-regulated lead-acid (VRLA) batteries
2009	AYDINOL M. K., Postgraduate, A.IZANLOU(Student), An ab initio surface study of FeTi for hydrogen storage applications
2009	AYDINOL M. K., Postgraduate, A.IZANLOU(Student), An ab initio surface design of FeTi for hydrogen storage applications
2008	AYDINOL M. K., Postgraduate, D.KEÇİK(Student), Ab initio design of novel magnesium alloys for hydrogen storage
2007	AYDINOL M. K., Postgraduate, A.KINACI(Student), First principles investigation of hydrogen storage in intermetallic systems
2006	AYDINOL M. K., Postgraduate, M.TOPÇUOĞLU(Student), Microstructural and electrochemical characterization of Ti-6Al-4V eli alloy
2006	AYDINOL M. K., Postgraduate, F.GÜRÇAĞ(Student), Non-equilibrium molecular dynamics of electromigration in aluminum and its alloys
2006	AYDINOL M. K., Postgraduate, M.Topçuoğlu(Student), Microstructural and electrochemical characterization of Ti-6Al-4V ELI alloy
2004	AYDINOL M. K., Postgraduate, G.HAMİDE(Student), Determination of susceptibility to intergranular corrosion in AISI 304L and 316L type stainless steels by electrochemical reactivation method
2003	AYDINOL M. K., Doctorate, A.Davutoğlu(Student), Molecular dynamics studies of diffusion behaviour in aluminum-copper metals and alloys
2001	AYDINOL M. K., AKDENİZ M. V., Postgraduate, H.BURCU(Student), Prediction of glass forming ability in TM-based binary alloys
2001	AYDINOL M. K., AKDENİZ M. V., Postgraduate, B.DİLSİZOĞLU(Student), Prediction of glass forming ability in Zr based binary alloys

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Synergetic electrochemical behavior of magnesium-doped ZnO nanorods with reduced graphene oxide**
Karamat S., Marawat F., Batoool U., Talha M., Jan Iftikhar F., Kadri Aydinol M. K., Mohamed Z., Numan A., Akhtar H., Kiran L.
JOURNAL OF ELECTROANALYTICAL CHEMISTRY, vol.967, 2024 (SCI-Expanded)
- II. **Size and morphology controlled polyol synthesis of LiFePO₄ nanoparticles with addition of organic acid combinations**
Coşkun E., Kurşun E., YILDIZ B., Aşkar Y., Bahtiyar D., AYDINOL M. K., MAVİŞ B., Çınar-Aygün S.
Ceramics International, vol.50, no.9, pp.15915-15930, 2024 (SCI-Expanded)
- III. **Morphology of Nanostructured Tantalum Oxide Controls Stem Cell Differentiation and Improves Corrosion Behavior**
Erdogan Y. K., Uslu E., Aydinol M. K., Saglam A. S. Y., Odabas S., Ercan B.
ACS BIOMATERIALS SCIENCE & ENGINEERING, vol.10, no.1, pp.377-390, 2024 (SCI-Expanded)
- IV. **Editorial: Advanced diagnosis and early warning strategies on degradation and safety of lithium-ion batteries**
AYDINOL M. K., Ulgut B., Oh K., ÖZTÜRK T.
Frontiers in Energy Research, vol.12, 2024 (SCI-Expanded)

- V. **Ionic liquids-assisted electrolytes in aqueous zinc ion batteries**
Ahmad M. I., Bahtiyar D., Khan H. W., Shah M. U. H., Kiran L., AYDINOL M. K., Yusuf M., Kamyab H., Rezanian S.
Journal of Energy Storage, vol.72, 2023 (SCI-Expanded)
- VI. **Mesoporous Cr₂O₃/MWCNTs/PANI nanocomposite as a high performance anode material for rechargeable lithium ion batteries**
Kiran L., AYDINOL M. K., Shah S. S., Anwar A., Abbas S. M., Bahtiyar D., Siddiq M., Rehman A., Ouladsmame M., Shahzad M. I.
Fuel, vol.352, 2023 (SCI-Expanded)
- VII. **Flowers Like α -MoO₃/CNTs/PANI Nanocomposites as Anode Materials for High-Performance Lithium Storage**
Kiran L., AYDINOL M. K., Ahmad A., Shah S. S., Bahtiyar D., Shahzad M. I., Eldin S. M., Bahajaj A. A. A.
Molecules, vol.28, no.8, 2023 (SCI-Expanded)
- VIII. **Cr-added nickel sulfides as electrocatalysts for oxygen evolution reaction**
Uygur C. S., AYDINOL M. K.
Materials Science and Engineering B: Solid-State Materials for Advanced Technology, vol.290, 2023 (SCI-Expanded)
- IX. **Development of activated carbon/bimetallic transition metal phosphide composite materials for electrochemical capacitors and oxygen evolution reaction catalysis**
Köse K. Ö., Aydınol M. K.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.46, no.15, pp.22078-22088, 2022 (SCI-Expanded)
- X. **Synthesis of Graphene-MoS₂ composite based anode from oxides and their electrochemical behavior**
Sarwar S., Karamat S., Saleem Bhatti A., Kadri Aydınol M. K., ORAL A., Hassan M. U.
Chemical Physics Letters, vol.781, 2021 (SCI-Expanded)
- XI. **Effect of calcium or yttrium doping on cation ordering and electrochemical performance of Li(Ni_{0.80-x}Co_{0.15}Al_{0.05}M_x)O₂ (M = Ca, Y) as a Li-ion battery cathode**
Uygur C. S., AYDINOL M. K.
MATERIALS SCIENCE AND ENGINEERING B-ADVANCED FUNCTIONAL SOLID-STATE MATERIALS, vol.264, 2021 (SCI-Expanded)
- XII. **Experimental investigation on the electrocatalytic behavior of Ag-based oxides, Ag₂XO₄ (X= Cr, Mo, W), for the oxygen reduction reaction in alkaline media**
Hamat B. A., AYDINOL M. K.
JOURNAL OF SOLID STATE CHEMISTRY, vol.290, 2020 (SCI-Expanded)
- XIII. **Effects of surface pretreatments and coating period on hydroxyapatite coating of Ti₆Al₄V alloy**
HACIOĞLU T., EVİS Z., TEZCANER A., AYDINOL M. K.
JOURNAL OF THE AUSTRALIAN CERAMIC SOCIETY, vol.56, no.2, pp.545-557, 2020 (SCI-Expanded)
- XIV. **Morphology effect on electrochemical properties of doped (W and Mo) 622NMC, 111NMC, and 226NMC cathode materials**
Pişkin B., Uygur C. S., AYDINOL M. K.
International Journal of Hydrogen Energy, vol.45, no.14, pp.7874-7880, 2020 (SCI-Expanded)
- XV. **Comparison of the short and long-term degradation behaviors of as-cast pure Mg, AZ91 and WE43 alloys**
Ocal E. B., Esen Z., Aydınol K., Dericioğlu A. F.
MATERIALS CHEMISTRY AND PHYSICS, vol.241, 2020 (SCI-Expanded)
- XVI. **Synthesis of Li_x(Ni_{0.80}Co_{0.15}Al_{0.05})O₂ cathodes with deficient and excess lithium using an ultrasonic sound-assisted co-precipitation method for Li-ion batteries**
Uygur C. S., Pişkin B., AYDINOL M. K.
Bulletin of Materials Science, vol.42, no.5, 2019 (SCI-Expanded)
- XVII. **Activation of Manganese Ions in Lithium-ion Battery Anode Materials via Nickel and Cobalt Doping**
Kunduraci M., Uygur C. S., AYDINOL M. K.
JOURNAL OF ELECTRONIC MATERIALS, vol.47, no.11, pp.6420-6427, 2018 (SCI-Expanded)
- XVIII. **Mo doping of layered Li(Ni_xMnyCo_{1-x-y-z}Mz)O₂ cathode materials for lithium-ion batteries**

- PİŞKİN B., Uygur C. S., AYDINOL M. K.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.42, no.12, pp.3888-3898, 2018 (SCI-Expanded)
- XIX. **Chemical and structural optimization of ZnCl₂ activated carbons via high temperature CO₂ treatment for EDLC applications**
KÖSE K. Ö., Piskin B., AYDINOL M. K.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.43, no.40, pp.18607-18616, 2018 (SCI-Expanded)
- XX. **Preface to the special issue on "1st International Symposium on Materials for Energy Storage and Conversion ((ESC)-E-m-IS 2015)"**
ÖZTÜRK T., Eroglu I., AYDINOL M. K.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.41, no.23, pp.9719-9722, 2016 (SCI-Expanded)
- XXI. **Development and characterization of layered Li(NixMnyCo1-x-y)O₂ cathode materials for lithium ion batteries**
Piskin B., AYDINOL M. K.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.41, no.23, pp.9852-9859, 2016 (SCI-Expanded)
- XXII. **Effect of Cr and Mo doping on the electrochemical properties of freeze-dried LiCoO₂**
Buyukburc A., AYDINOL M. K.
INTERNATIONAL JOURNAL OF MATERIALS RESEARCH, vol.105, no.10, pp.983-991, 2014 (SCI-Expanded)
- XXIII. **Direct synthesis of Mg-Ni compounds from their oxides**
Tan S., Aydinol K., ÖZTÜRK T., KARAKAYA İ.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.504, no.1, pp.134-140, 2010 (SCI-Expanded)
- XXIV. **An ab initio study of dissociative adsorption of H₂ on FeTi surfaces**
Izanlou A., AYDINOL M. K.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.35, no.4, pp.1681-1692, 2010 (SCI-Expanded)
- XXV. **Synthesis of FeTi from mixed oxide precursors**
Tan S., Oers T., AYDINOL M. K., ÖZTÜRK T., KARAKAYA İ.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.475, pp.368-372, 2009 (SCI-Expanded)
- XXVI. **Density functional and dynamics study of the dissociative adsorption of hydrogen on Mg (0001) surface**
Kecik D., AYDINOL M. K.
SURFACE SCIENCE, vol.603, no.2, pp.304-310, 2009 (SCI-Expanded)
- XXVII. **Atomistic simulation of self-diffusion in Al and Al alloys under electromigration conditions**
Sen F. G., AYDINOL M. K.
JOURNAL OF APPLIED PHYSICS, vol.104, no.7, 2008 (SCI-Expanded)
- XXVIII. **A comparative ab initio study of the ferroelectric behaviour in KNO₃ and CaCO₃**
AYDINOL M. K., Mantese J. V., Alpay S. P.
JOURNAL OF PHYSICS-CONDENSED MATTER, vol.19, no.49, 2007 (SCI-Expanded)
- XXIX. **Ab initio investigation of FeTi-H system**
Kinaci A., Aydinol M. K.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.32, no.13, pp.2466-2474, 2007 (SCI-Expanded)
- XXX. **Determination of susceptibility to intergranular corrosion and electrochemical reactivation behaviour of AISI 316L type stainless steel**
Aydogdu G. H., Aydinol M. K.
CORROSION SCIENCE, vol.48, no.11, pp.3565-3583, 2006 (SCI-Expanded)
- XXXI. **Phase separation tendencies of aluminum-doped transition-metal oxides (LiAl(1-x)M(x)O(2)) in the alpha-NaFeO(2) crystal structure**
Buta S., Morgan D., VanderVen A., AYDINOL M. K., Ceder G.
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.146, no.12, pp.4335-4338, 1999 (SCI-Expanded)
- XXXII. **Lithium-intercalation oxides for rechargeable batteries**
Ceder G., VanderVen A., AYDINOL M. K.
JOM-JOURNAL OF THE MINERALS METALS & MATERIALS SOCIETY, vol.50, no.9, pp.35-40, 1998 (SCI-Expanded)
- XXXIII. **First-principles investigation of phase stability in Li_xCoO₂**

- VanderVen A., AYDINOL M. K., Ceder G., Kresse G., Hafner J.
PHYSICAL REVIEW B, vol.58, no.6, pp.2975-2987, 1998 (SCI-Expanded)
- XXXIV. **The electrochemical stability of lithium metal oxides against metalreduction**
Ceder G., AYDINOL M. K.
Solid State Ionics, vol.109, pp.151-157, 1998 (SCI-Expanded)
- XXXV. **First-principles evidence for stage ordering in Li(x)CoO(2)**
VanderVen A., AYDINOL M. K., Ceder G.
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.145, no.6, pp.2149-2155, 1998 (SCI-Expanded)
- XXXVI. **Identification of cathode materials for lithium batteries guided by first-principles calculations**
Ceder G., Chiang Y., Sadoway D., AYDINOL M. K., Jang Y., Huang B.
NATURE, vol.392, no.6677, pp.694-696, 1998 (SCI-Expanded)
- XXXVII. **Thermodynamics of oxides with substitutional disorder A microscopicmodel and evaluation of important energy contributions**
Ceder G., Kohan A., AYDINOL M. K., Tepesch P., VanderVen A.
Journal Of The American Ceramic Society, vol.81, pp.517-525, 1998 (SCI-Expanded)
- XXXVIII. **First-principles prediction of insertion potentials in Li-Mn oxides for secondary Li batteries**
AYDINOL M. K., Ceder G.
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.144, no.11, pp.3832-3835, 1997 (SCI-Expanded)
- XXXIX. **Ab initio calculation of the intercalation voltage of lithium transitionmetal oxide electrodes for rechargeable batteries**
AYDINOL M. K., Kohan A., Ceder G.
Journal Of Power Sources, vol.68, pp.664-668, 1997 (SCI-Expanded)
- XL. **Ab initio study of lithium intercalation in metal oxides and metal dichalcogenides**
AYDINOL M. K., Kohan A., Ceder G., Cho K., Joannopoulos J.
PHYSICAL REVIEW B, vol.56, no.3, pp.1354-1365, 1997 (SCI-Expanded)
- XLI. **Application of first principles calculations to the design of rechargeable Li batteries**
Ceder G., AYDINOL M. K., Kohan A.
Computational Materials Science, vol.8, pp.161-169, 1997 (SCI-Expanded)
- XLII. **Coherency strain effects on TEM images of composite precipitates in Al-Li-Zr alloys**
Aydinol M., Bor A.
JOURNAL OF MATERIALS SCIENCE, vol.31, no.18, pp.4883-4889, 1996 (SCI-Expanded)
- XLIII. **TRANSMISSION ELECTRON-MICROSCOPY IMAGE-ANALYSIS OF COMPOSITE PRECIPITATES IN AL-LI-ZR ALLOYS**
AYDINOL M. K., Bor Ş.
JOURNAL OF MATERIALS SCIENCE LETTERS, vol.14, no.16, pp.1147-1149, 1995 (SCI-Expanded)
- XLIV. **SIMULATION OF ELECTRON-DIFFRACTION PATTERNS OF ALLOYS WITH ORIENTED PRECIPITATES**
AKBAY T., AYDINOL K., BOR A.
JOURNAL OF APPLIED CRYSTALLOGRAPHY, vol.27, pp.379-384, 1994 (SCI-Expanded)
- XLV. **COARSENING OF DELTA' (AL3LI) AND COMPOSITE PRECIPITATES IN AN AL-2.5-PERCENT LI-0.15-PERCENT ZR ALLOY**
AYDINOL M., BOR A.
JOURNAL OF MATERIALS SCIENCE, vol.29, no.1, pp.15-25, 1994 (SCI-Expanded)

Articles Published in Other Journals

- I. **Design of a high temperature erosion apparatus for testing of boiler tubes**
Ergün H., Aydinol K., ÖZTÜRK T., Doruk M.
Turkish Journal of Engineering and Environmental Sciences, vol.37, no.2, pp.178-185, 2013 (Scopus)
- II. **Non-equilibrium molecular dynamics simulation of electromigration in aluminum-based metallic interconnects**

Refereed Congress / Symposium Publications in Proceedings

- I. **Optimization of Graphene Synthesis by Electrochemical Exfoliation of Graphit**
Kurt V., AYDINOL M. K.
4th International Symposium on Materials for Energy Storage and Conversion, 11 - 13 September 2019
- II. **Novel Zirconium based Active Material Synthesis and Performance as a Li-ion Battery Electrode**
Savaş Uygur C., AYDINOL M. K.
4th International Symposium on Materials for Energy Storage and Conversion, 11 - 13 September 2019
- III. **Effect of Ni-Mn-Co Ratio on Structural and Electrochemical Properties of NMC Cathode Materials**
PİŞKİN B., SAVAS UYGUR C., AYDINOL M. K.
4th International Symposium on Materials for Energy Storage and Conversion (mESC-IS 2019), 11 - 13 September 2019
- IV. **Ni-Rich LiNixMnyCozO2 (x0.6) Cathode Material Development for Li-Ion Battery via Sol-Gel Method**
yıldırım m. a., AYDINOL M. K.
4th International Symposium on Materials for Energy Storage and Conversion, 11 - 13 September 2019
- V. **Topological analysis and large-scale computational screening for solid Li-ion superconductor candidates**
ÖVÜN M., AYDINOL M. K.
4th International Symposium on Materials for Energy Storage and Conversion, 11 - 13 September 2019
- VI. **Synthesis and Characterization of Composite Active Cathode Materials for Lithium-Ion Batteries**
erdoğan e. e., AYDINOL M. K.
4th International Symposium on Materials for Energy Storage and Conversion, 11 - 13 September 2019
- VII. **Structural and Electrochemical Performance of Mo-Doped Li(Ni0.8-xCo0.15Al0.05)O2 Cathodes for Li-Ion Batteries**
PİŞKİN B., SAVAS UYGUR C., AYDINOL M. K.
4th International Symposium on Materials for Energy Storage and Conversion (mESC-IS 2019), 11 - 13 September 2019
- VIII. **Development and Characterization of Activated Carbon / Transition Metal Phosphide Composites for Electrochemical Capacitors**
KÖSE K. Ö., AYDINOL M. K.
4th International Symposium on Materials for Energy Storage and Conversion, 11 - 13 September 2019
- IX. **The Improvement in Reversible Capacity by Calcium Doping in Li(Ni1/3Mn1/3Co1/3)O2 Lithium Ion Battery Cathodes**
PİŞKİN B., SAVAS UYGUR C., AYDINOL M. K.
3rd International Symposium on Materials for Energy Storage and Conversion, 10 - 12 September 2018
- X. **Morphology Effect on Electrochemical Properties of NMC-622, NMC-111 and NMC-226 Cathode Materials**
PİŞKİN B., SAVAS UYGUR C., AYDINOL M. K.
3rd International Symposium on Materials for Energy Storage and Conversion, 10 - 12 September 2018
- XI. **Prospects of Large Scale Energy Storage in Turkey- Pumped Hydro and Electrochemical Energy Storage**
ÖZTÜRK T., AYDIN İ., AYDINOL M. K., PATAT Ş.
14TH INTERNATIONAL CONFERENCE ON ENERGY STORAGE, 25 - 28 April 2018
- XII. **Doping of layered Li(NixMnyCo1-x-y-zMz)O2 (z=Ag,Cu) cathode materials for lithium ion batteries**
PİŞKİN B., SAVAS UYGUR C., AYDINOL M. K.
2017 MRS Fall Meeting Exhibit, 26 November - 01 December 2017
- XIII. **Ab initio Electronic Structure Calculations of LaBO3 (B= Cr, Mn and Fe) Perovskites**

- AFAL GENİŞ A., AYDINOL M. K.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XIV. **Development and Characterization of Tungstates and Molybdates for Li-ion Batteries**
Kaygusuz B., AYDINOL M. K.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XV. **Effect of Different Binders on Cyclic Performance of Si/C Anodes for Secondary Lithium-Ion Batteries**
Miser B., Livan P., Altınok S., Eyövge c., ÖZTÜRK T., AYDINOL M. K.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XVI. **Electrochemical Properties of Surface Processed Silicon Micro Particles for Secondary Lithium-Ion Battery Anodes**
Miser B., AYDINOL M. K.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XVII. **Effect of Physical Activation on the Capacitive Properties of Chemically Activated Carbons**
KÖSE K. Ö., AYDINOL M. K.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XVIII. **Carbon Encapsulation and Encapsulated Si Particles for Energy Storage**
Livan P., Miser B., Eyövge c., AYDINOL M. K., ÖZTÜRK T.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XIX. **Optimization of Graphene Synthesis by Electrochemical Exfoliation of Graphite**
Kurt V., AYDINOL M. K.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XX. **Production and Characterization of Ag-based Oxide Catalysts for Zinc-Air Batteries**
ARSLAN B., AYDINOL M. K.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XXI. **The effect of lithium amount on electrochemical and structural characteristics of $\text{Li}_x(\text{Ni}_{0.80}\text{Co}_{0.15}\text{Al}_{0.05})\text{O}_2$ cathode active materials for lithium-ion batteries**
SAVAS UYGUR C., PİŞKİN B., AYDINOL M. K.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XXII. **Doping of layered $\text{Li}(\text{Ni}_x\text{Mn}_y\text{Co}_{1-x-y-z}\text{M}_z)\text{O}_2$ ($z=\text{W},\text{Mo}$) cathode materials for lithium ion batteries**
PİŞKİN B., SAVAS UYGUR C., AYDINOL M. K.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XXIII. **Carbon Encapsulated Silicon Nanoparticles as Anodes for Lithium Ion Batteries**
Livan P., Miser B., Altınok S., Eyövge C., AYDINOL M. K., ÖZTÜRK T.
Symposium on Plasma Nano Science and Technology held during the 231st Meeting of the Electrochemical-Society (ECS), Louisiana, United States Of America, 28 May - 01 June 2017, vol.77, pp.373-382
- XXIV. **Development and Characterization of Catalyst Materials of Zinc Air Batteries**
ARSLAN B., AYDINOL M. K.
Materials Research Society Fall Meeting, Boston, MA, United States Of America, 27 November - 02 December 2016
- XXV. **Productions and Characterization of Layered Cathode Materials for Lithium ion Batteries**
PİŞKİN B., AFAL GENİŞ A., AYDINOL M. K.
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- XXVI. **Ab initio Molecular Dynamics Characterization of La based Perovskite Type Oxides for Metal Air Cell Cathodes**
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- XXVII. **Production and characterization of silicon particles with nanowired surfaces for secondary Li ion battery anode**
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- XXVIII. **Development and characterization of new layered cathode materials for Li ion batteries**

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- XXIX. **W doped LiCoO₂ Effect of different starting chemicals doping contents and additional doping elements**
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- XXX. **LiFePO₄ C nano plates synthesis via ultrasound assisted precursor precipitation**
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- XXXI. **The electrochemical properties of doped LiM_nxM_{1-x}PO₄ synthesized by spray pyrolysis**
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- XXXVIII. **A TEM SURVEY ON AN AL-2.5-PERCENT LI-0.15-PERCENT ZR ALLOY**
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Supported Projects

2016 - Continues	Enerji Depolama Malzemeleri ve Cihazları Araştırma Merkezi, CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi
2022 - 2023	Nikel fosfit katkılı aktif karbon kompozit malzeme geliştirilmesi ve süperkapasitörlerde kullanımı, Project Supported by Higher Education Institutions
2015 - 2018	Lityum iyon bataryalar için kalay esas anot malzemesi geliştirilmesi ve üretilmesi, Project Supported by Higher Education Institutions
2017 - 2017	ÇİNKO HAVA BATARYALARININ KATALİZÖR MALZEMELERİNİN GELİŞTİRİLMESİ VE KARAKTERİZASYONU, Project Supported by Higher Education Institutions
2017 - 2017	GRAFİTİN ELEKTROKİMYASAL EKSFOLİYASYONU İLE GRAFEN ÜRETİMİNİN OPTİMİZASYONU, Project Supported by Higher Education Institutions

2017 - 2017	TEMEL PRENSİPLER YÖNTEMİYLE KOMPLEKS OKSİT KATALİSTLERDEKİ OKSİJEN İNDİRGE ME REAKSİYONLARININ KARAKTERİZASYONU, Project Supported by Higher Education Institutions
2017 - 2017	ENERJİ DEPOLAMA UYGULAMALARI İÇİN BİYOKÜTLE ESASLI AKTİF KARBON MALZEMELERİNİN YAPISAL VE ELEKTROKİMYASAL ÖZELLİKLERİNİN İNCELENMESİ, Project Supported by Higher Education Institutions
2017 - 2017	LİTYUM İYON BATARYALARINDA Lİ(Nİ-CO-AL) OKSİTLERİNİN KATOT MALZEMESİ OLARAK ULTRASONİK SES DALGASI YÖNTEMİYLE ÜRETİLMESİ VE KARAKTERİZASYONU, Project Supported by Higher Education Institutions
2014 - 2016	FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, Project Supported by Higher Education Institutions
2014 - 2016	FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, Project Supported by Higher Education Institutions
2014 - 2016	FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, Project Supported by Higher Education Institutions
2014 - 2016	FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, Project Supported by Higher Education Institutions
2014 - 2016	FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, Project Supported by Higher Education Institutions
2014 - 2015	FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, Project Supported by Higher Education Institutions
2014 - 2015	FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, Project Supported by Higher Education Institutions
2014 - 2014	FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, Project Supported by Higher Education Institutions
2010 - 2011	Lityum İyon Piller İçin Yüksek Kapasiteli Ve Enerjili Katot Malzemelerinin Geliştirilmesi Üretimi Ve Karakterizasyonu., Project Supported by Higher Education Institutions

Patent

2016	AYDINOL M. K., Yeniden doldurulabilir Lityum iyon bataryalar için W ve M ile alaşımli LiCoO ₂ ve bunun üretim metodu, Patent, CHAPTER C Chemistry; Metallurgy, Standard Registration, 2016
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Metrics

Publication: 90
Citation (WoS): 3322
Citation (Scopus): 4305
H-Index (WoS): 17
H-Index (Scopus): 20

Non Academic Experience

1994 - 1998	Massachusetts Institute of Technology
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