

Prof. SEVDA AVCI

Personal Information

Office Phone: [+90 216 280 3413](tel:+902162803413)

Email: sevda.avci@medeniyet.edu.tr

Web: <https://avesis.medeniyet.edu.tr/sevda.avci>

Education Information

Post Doctorate, Argonne National Laboratory, Materials Science Division, X-Ray And Neutron Scattering Group, United States Of America 2010 - 2012

Doctorate, Northern Illinois University, Fen Bilimleri, Fizik, United States Of America 2003 - 2010

Under Graduate, Boğaziçi Üniversitesi, Eğitim Fak, Fizik Öğretmenliği, Turkey 1995 - 2000

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, SUPERCONDUCTING PROPERTIES AND VORTEX DYNAMICS OF Bi₂Sr₂CaCu₂O₈ NANORIBBONS WITH AND WITHOUT PERIODIC ARRAY OF NANOSCALE HOLES, Northern Illinois University, Fen Bilimleri, Fizik, 2010

Research Areas

Physics, Interdisciplinary Physics and Related Science and Technology Areas, Materials Science, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Structure of Liquids and Solids; Crystallography, Thermal Properties of Condensed Matter, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Magnetic Properties and Materials, Superconductivity, Natural Sciences

Academic Titles / Tasks

Professor, Istanbul Medeniyet University, Faculty Of Engineering And Natural Sciences , Engineering Physics, 2020 - Continues

Professional Experience

Head of Department, Afyon Kocatepe Üniversitesi, 2014 - 2015

Advising Theses

AVCI S., Bor Katkılı LiMn₂O₄ spinel katot malzemelerinin fiziksel özelliklerinin ve pil performanslarının incelenmesi, Post

Jury Memberships

Post Graduate, Tez savunma Jürisi, Afyon Kocatepe Üniversitesi, November, 2014

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Investigations of the capacity fading mechanism of Na(0.44)MnO₂ via ex situ XAS and magnetization measurements**
ALTIN S., Oz E., ALTIN E., Demirel S., BAYRİ A., AVCI S.
DALTON TRANSACTIONS, vol.47, no.47, pp.17102-17108, 2018 (Journal Indexed in SCI)
- II. **Structural, magnetic, electrical, and electrochemical properties of Sr-Co-Ru-O: A hybrid-capacitor application**
ALTIN S., BAYRİ A., Demirel S., Oz E., ALTIN E., AVCI S.
JOURNAL OF THE AMERICAN CERAMIC SOCIETY, vol.101, no.10, pp.4572-4581, 2018 (Journal Indexed in SCI)
- III. **Thermally Induced Spin State Transition in LiCoO₂ and Its Effects on Battery Performance**
Oz E., Demirel S., ALTIN S., ALTIN E., BAYRİ A., AVCI S.
ELECTROCHIMICA ACTA, vol.248, pp.449-453, 2017 (Journal Indexed in SCI)
- IV. **Electrochemical effects and magnetic properties of B substituted LiCoO₂: Improving Li-battery performance**
Oz E., ALTIN S., DEMİREL S., BAYRİ A., ALTIN E., Baglayan O., AVCI S.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.657, pp.835-847, 2016 (Journal Indexed in SCI)
- V. **Enhancement of battery performance of LiMn₂O₄: correlations between electrochemical and magnetic properties**
DEMİREL S., Oz E., ALTIN S., BAYRİ A., ALTIN E., AVCI S.
RSC ADVANCES, vol.6, no.49, pp.43823-43831, 2016 (Journal Indexed in SCI)
- VI. **Tetragonal magnetic phase in Ba_{1-x}K_xFe₂As₂ from x-ray and neutron diffraction**
ALLRED J. M. , Avci S., CHUNG D. Y. , CLAUS H., KHALYAVIN D. D. , MANUEL P., TADDEI K. M. , KANATZIDIS M. G. , ROSENKRANZ S., OSBORN R., et al.
PHYSICAL REVIEW B, vol.92, no.9, 2015 (Journal Indexed in SCI)
- VII. **Growth mechanism and magnetic and electrochemical properties of Na_{0.44}MnO₂ nanorods as cathode material for Na-ion batteries**
DEMİREL S., Oz E., ALTIN E., ALTIN S., BAYRİ A., Kaya P., Turan S., Avci S.
MATERIALS CHARACTERIZATION, vol.105, pp.104-112, 2015 (Journal Indexed in SCI)
- VIII. **Coincident structural and magnetic order in BaFe₂(As_{1-x}P_x)₂ revealed by high-resolution neutron diffraction**
Allred J. M. , Taddei K. M. , Bugaris D. E. , Avci S., Chung D. Y. , Claus H., DELA CRUZ C., Kanatzidis M. G. , Rosenkranz S., Osborn R., et al.
PHYSICAL REVIEW B, vol.90, no.10, 2014 (Journal Indexed in SCI)
- IX. **Enhanced thermoelectric properties induced by chemical pressure in Ca₃Co₄O₉**
DEMİREL S., Avci S., ALTIN E., ALTIN S., YAKINCI M. C.
CERAMICS INTERNATIONAL, vol.40, no.4, pp.5217-5222, 2014 (Journal Indexed in SCI)
- X. **Magnetically driven suppression of nematic order in an iron-based superconductor**
Avci S., CHMAISSEM O., ALLRED J. M. , ROSENKRANZ S., EREMIN I., CHUBUKOV A. V. , BUGARIS D. E. , CHUNG D. Y. , KANATZIDIS M. G. , CASTELLAN J. -, et al.
NATURE COMMUNICATIONS, vol.5, 2014 (Journal Indexed in SCI)
- XI. **Oxygen Stoichiometry in the Geometrically Frustrated Kagome System YBaCo₄O_{7+δ}: Impact on Phase Behavior and Magnetism**

- Avci S., CHMAISSEM O., ZHENG H., HUQ A., MANUEL P., MITCHELL J. F.
CHEMISTRY OF MATERIALS, vol.25, no.21, pp.4188-4196, 2013 (Journal Indexed in SCI)
- XII. **Structural, magnetic, and superconducting properties of Ba_{1-x}NaxFe₂As₂**
Avci S., ALLRED J. M. , CHMAISSEM O., CHUNG D. Y. , ROSENKRANZ S., SCHLUETER J. A. , CLAUS H., DAOUD-ALADINE A., KHALYAVIN D. D. , MANUEL P., et al.
PHYSICAL REVIEW B, vol.88, no.9, 2013 (Journal Indexed in SCI)
- XIII. **Phase relations in KxFe₂-ySe₂ and the structure of superconducting KxFe₂Se₂ via high-resolution synchrotron diffraction**
Shoemaker D. P. , Chung D. Y. , Claus H., Francisco M. C. , Avci S., LLOBET A., Kanatzidis M. G.
PHYSICAL REVIEW B, vol.86, no.18, 2012 (Journal Indexed in SCI)
- XIV. **Enhancement of the Curie temperature in NdBaCo₂O_{5.5} by A-site Ca substitution**
Kolesnik S., Dabrowski B., Chmaissem O., Avci S., HODGES J. P. , AVDEEV M., Swierczek K.
PHYSICAL REVIEW B, vol.86, no.6, 2012 (Journal Indexed in SCI)
- XV. **Phase diagram of Ba_{1-x}KxFe₂As₂**
Avci S., Chmaissem O., Chung D. Y. , Rosenkranz S., Goremychkin E. A. , Castellan J. P. , Todorov I. S. , Schlueter J. A. , Claus H., DAOUD-ALADINE A., et al.
PHYSICAL REVIEW B, vol.85, no.18, 2012 (Journal Indexed in SCI)
- XVI. **Kinetic control of structural and magnetic states in LuBaCo₄O₇**
Avci S., CHMAISSEM O., ZHENG H., HUQ A., KHALYAVIN D. D. , STEPHENS P. W. , Suchomel M. R. , MANUEL P., MITCHELL J. F.
PHYSICAL REVIEW B, vol.85, no.9, 2012 (Journal Indexed in SCI)
- XVII. **Magnetoelastic coupling in the phase diagram of Ba_{1-x}KxFe₂As₂ as seen via neutron diffraction**
Avci S., CHMAISSEM O., GOREMYCHKIN E. A. , ROSENKRANZ S., CASTELLAN J., CHUNG D. Y. , TODOROV I. S. , SCHLUETER J. A. , CLAUS H., KANATZIDIS M. G. , et al.
PHYSICAL REVIEW B, vol.83, no.17, 2011 (Journal Indexed in SCI)
- XVIII. **Matching effect and dynamic phases of vortex matter in Bi₂Sr₂CaCu₂O₈ nanoribbon with a periodic array of holes**
Avci S., Xiao Z. L. , Hua J., IMRE A., DIVAN R., Pearson J., Welp U., Kwok W. K. , Crabtree G. W.
APPLIED PHYSICS LETTERS, vol.97, no.4, 2010 (Journal Indexed in SCI)
- XIX. **Magnetoresistance oscillations in superconducting granular niobium nitride nanowires**
Patel U., Xiao Z. L. , Gurevich A., Avci S., Hua J., DIVAN R., WELP U., KWOK W. K.
PHYSICAL REVIEW B, vol.80, no.1, 2009 (Journal Indexed in SCI)
- XX. **Growth and superconductivity of FeSex crystals**
Patel U., Hua J., Yu S. H. , Avci S., Xiao Z. L. , Claus H., Schlueter J., Vlasko-Vlasov V. V. , Welp U., Kwok W. K.
APPLIED PHYSICS LETTERS, vol.94, no.8, 2009 (Journal Indexed in SCI)
- XXI. **Synthesis and superconducting properties of niobium nitride nanowires and nanoribbons**
PATEL U., Avci S., XIAO Z. L. , HUA J., YU S. H. , ITO Y., DIVAN R., OCOLA L. E. , ZHENG C., CLAUS H., et al.
APPLIED PHYSICS LETTERS, vol.91, no.16, 2007 (Journal Indexed in SCI)

Supported Projects

- AVCI S., DEMİREL S., ALTIN S., Project Supported by Higher Education Institutions, Na₂Ti₃O₇ Nanoçubuklarının Sentezi ve Elektrokimyasal Özellikleri, 2017 - 2018
- Can E., AVCI S., KEÇECİ K., Project Supported by Higher Education Institutions, Mühendislik ve Doğa Bilimleri Fakültesi Fizik Mühendisliği Bölümü Lisans Laboratuvarlarının İhtiyaçlarının Temini, 2017 - 2018
- AVCI S., ALTIN S., ÖZ E., DEMİREL S., Project Supported by Higher Education Institutions, Li-iyon Pillerinde Kullanılan Katot Malzemelerinin Elektrokimyasal ve Manyetik Özellikleri Arasındaki Korelasyonlar, 2016 - 2016
- AVCI S., TUBITAK Project, Bor katkılı yeni teknoloji Na-ion pillerin tasarlanması ve performanslarının incelenmesi, 2012 - 2014

Citations

Total Citations (WOS):764

h-index (WOS):14