

# Prof. VELİ SERKAN KOLAT

## Personal Information

Office Phone: [+90 422 377 3797](tel:+904223773797)

Email: [veli.kolat@inonu.edu.tr](mailto:veli.kolat@inonu.edu.tr)

Web: <https://avesis.inonu.edu.tr/veli.kolat>

Address: İnönü Üniversitesi Fen Edebiyat Fakültesi Fizik Bölümü 44280 Malatya

## International Researcher IDs

ORCID: 0000-0002-8864-5051

Publons / Web Of Science ResearcherID: ABI-5280-2020

Yoksis Researcher ID: 115599

## Education Information

Undergraduate, Inonu University, Fen Edebiyat Fakültesi, Fizik, Turkey 1994 - 1998

## Research Areas

Physics, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Natural Sciences

## Academic Titles / Tasks

Professor, Inonu University, Fen-Edebiyat Fakültesi, Fizik, 2017 - Continues

Associate Professor, Inonu University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2011 - 2016

Assistant Professor, Inonu University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2007 - 2011

Research Assistant, Inonu University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 1999 - 2007

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Structural, magnetic and magnetocaloric properties of Ru doped Pr<sub>0.67</sub>Ca<sub>0.33</sub>Mn<sub>1-x</sub>Ru<sub>x</sub>O<sub>3</sub> manganites**  
Kanikirmizi T., İZGİ T., BAYRİ N., GENÇER H., KOLAT V. S., Pektas M., ATALAY S.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.33, no.27, pp.21778-21795, 2022 (SCI-Expanded)
- II. **Detection of Diazinon Organophosphates Using Magnetoelastic Sensor**  
ATALAY S., ATEŞ B., Balcioglu S., Inan O. O., Kolak S., ŞİMŞEK M., KOLAT V. S., KÖYTEPE S., İZGİ T.  
IEEE TRANSACTIONS ON MAGNETICS, vol.58, no.2, 2022 (SCI-Expanded)
- III. **Magnetic and Magnetocaloric Properties of Pr<sub>2</sub>Fe<sub>17-x</sub>Cu<sub>x</sub> Intermetallic Compounds**  
Cengiz N. E., Pektas M., KOLAT V. S., İZGİ T., GENÇER H., BAYRİ N., ATALAY S.  
JOURNAL OF MAGNETICS, vol.26, no.3, pp.332-340, 2021 (SCI-Expanded)
- IV. **Effects of Ru substitution on the structural, magnetic and magnetocaloric properties of Pr<sub>0.68</sub>Ca<sub>0.22</sub>Sr<sub>0.1</sub>Mn<sub>1-x</sub>Ru<sub>x</sub>O<sub>3</sub> (x=0, 0.05, 0.1 and 0.2) compounds**  
Pektas M., İZGİ T., GENÇER H., ATALAY S., KOLAT V. S., BAYRİ N.

JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.31, no.18, pp.15731-15741, 2020 (SCI-Expanded)

- V. **A Rapid Response Humidity Sensor for Monitoring Human Respiration with TiO<sub>2</sub>-Based Nanotubes as a Sensing Layer**  
ATALAY S., ERDEMOĞLU S., KOLAT V. S., İZGİ T., Akgeyik E., Yilmaz H. C., Kaya H., ATALAY F.  
JOURNAL OF ELECTRONIC MATERIALS, vol.49, no.5, pp.3209-3215, 2020 (SCI-Expanded)
- VI. **Magnetoelastic Humidity Sensors with TiO<sub>2</sub> Nanotube Sensing Layers**  
ATALAY S., İZGİ T., KOLAT V. S., ERDEMOĞLU S., Inan O. O.  
SENSORS, vol.20, no.2, 2020 (SCI-Expanded)
- VII. **Magnetic and magnetocaloric properties of La<sub>0.94</sub>Bi<sub>0.06</sub>Mn<sub>1-x</sub>Cr<sub>x</sub>O<sub>3</sub> (x= 0; 0.05; 0.1; 0.15; 0.2; 0.25) samples**  
İZGİ T., KOLAT V. S., GENÇER H., BAYRİ N., ÖZKAN U.  
ACTA PHYSICA POLONICA A, vol.135, pp.100-105, 2019 (SCI-Expanded)
- VIII. **Magnetic-propelled Fe<sub>3</sub>O<sub>4</sub>-chitosan carriers enhance l-asparaginase catalytic activity: a promising strategy for enzyme immobilization**  
ATEŞ B., ULU A., KÖYTEPE S., ALI NOMA S. A., KOLAT V. S., İZGİ T.  
RSC ADVANCES, vol.8, no.63, pp.36063-36075, 2018 (SCI-Expanded)
- IX. **Structural, Magnetic and Magnetocaloric Properties of Pr<sub>0.68</sub>Ca<sub>0.32-x</sub> Bi (x) MnO<sub>3</sub> (x=0, 0.1, 0.18, 0.26 and 0.32) Compounds**  
GENÇER H., İZGİ T., BAYRİ N., PEKTAS M., KOLAT V. S., ATALAY S.  
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.29, no.9, pp.2443-2450, 2016 (SCI-Expanded)
- X. **Magnetoelastic Sensor Studies on Amorphous Magnetic FeSiB Wire and the Application in Viscosity Measurement**  
ATALAY S., KOLAT V. S., BAYRİ N., İZGİ T.  
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.29, no.6, pp.1551-1556, 2016 (SCI-Expanded)
- XI. **Crystallisation Kinetics of Co<sub>75-x</sub>M<sub>x</sub>Si<sub>15</sub>B<sub>10</sub> (M = Fe, Mn, Cr and x=0, 5) Amorphous Alloys**  
BAYRİ N., KOLAT V. S., İZGİ T., ATALAY S., GENÇER H., SOVAK P.  
ACTA PHYSICA POLONICA A, vol.129, no.1, pp.84-87, 2016 (SCI-Expanded)
- XII. **Surface modification of YIG by magnet array**  
ATALAY S., KOLAT V. S., BAKIR H. G., İZGİ T., KAYA A., KAYA O. A., GENÇER H.  
APPLIED SURFACE SCIENCE, vol.354, pp.337-341, 2015 (SCI-Expanded)
- XIII. **Study of nanocrystallization process in FeCrCuNbSiB amorphous alloys by Young's modulus measurements**  
BAYRİ N., ATALAY S., KOLAT V. S., İZGİ T., SOVAK P.  
JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS, vol.17, pp.1372-1378, 2015 (SCI-Expanded)
- XIV. **One-Dimensional Magnonic Crystal for Magnetic Field Sensing**  
ATALAY S., KAYA A., KOLAT V. S., GENÇER H., İZGİ T.  
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.28, no.7, pp.2071-2075, 2015 (SCI-Expanded)
- XV. **Structural, Magnetic, and Magnetocaloric Properties of La<sub>1-x</sub> Bi (x) MnO<sub>3</sub> (x=0.01, 0.03, 0.06, 0.1, 0.2) Compounds**  
KOLAT V. S., ATALAY S., İZGİ T., GENÇER H., BAYRİ N.  
METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, no.6, pp.2591-2597, 2015 (SCI-Expanded)
- XVI. **The structural, magnetic and magnetocaloric properties of La<sub>0.67</sub>Ca<sub>0.33-x</sub>Mg<sub>x</sub>MnO<sub>3</sub> (x=0, 0.02, 0.05, 0.1, 0.2, 0.33) compounds**  
KOLAT V. S., ESTURK U., İZGİ T., GENÇER H., ATALAY S.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.628, pp.1-8, 2015 (SCI-Expanded)
- XVII. **YIG Film for Magnetic Field Sensor**  
KAYA A., ATALAY S., GENÇER H., KAYA O. A., KOLAT V. S., İZGİ T.  
ACTA PHYSICA POLONICA A, vol.127, no.4, pp.937-939, 2015 (SCI-Expanded)
- XVIII. **Structural, magnetic and magnetocaloric properties of the compound La<sub>0.94</sub>Bi<sub>0.06</sub>MnO<sub>3</sub>**

- İZGİ T., KOLAT V. S., BAYRİ N., GENÇER H., ATALAY S.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.372, pp.112-116, 2014 (SCI-Expanded)
- XIX. **Field Induced Unusual Magnetic Behavior at Low Temperature in Pr<sub>0.67</sub>Ca<sub>0.33</sub>MnO<sub>3</sub>**  
PEKTAS M., GENÇER H., İZGİ T., KOLAT V. S., ATALAY S.  
ACTA PHYSICA POLONICA A, vol.125, no.2, pp.217-219, 2014 (SCI-Expanded)
- XX. **Crack Detection Using Fluxgate Magnetic Field Sensor**  
İZGİ T., Göktepe M., BAYRİ N., KOLAT V. S., ATALAY S.  
ACTA PHYSICA POLONICA A, vol.125, no.2, pp.211-213, 2014 (SCI-Expanded)
- XXI. **Production of LaCaMnO<sub>3</sub> Composite by Ball Milling**  
GENÇER H., CENGİZ N. E., KOLAT V. S., İZGİ T., ATALAY S.  
ACTA PHYSICA POLONICA A, vol.125, no.2, pp.214-216, 2014 (SCI-Expanded)
- XXII. **The crystallisation kinetics, magnetic and magnetocaloric properties of Gd<sub>55</sub>Co<sub>20</sub>Fe<sub>5</sub>Al<sub>20</sub> (-) Si-x(x) (x=0, 5, 10, 15) alloys**  
GENÇER H., İZGİ T., KOLAT V. S., BAYRİ N., KAYA A., ATALAY S.  
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.379, pp.185-191, 2013 (SCI-Expanded)
- XXIII. **Influence of Si substitution on the structural, magnetic and magnetocaloric properties of Gd<sub>55</sub>Co<sub>20</sub>Fe<sub>5</sub>Al<sub>20-x</sub>Si<sub>x</sub> alloys**  
ATALAY S., GENÇER H., KAYA A., KOLAT V. S., İZGİ T.  
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.365, pp.99-104, 2013 (SCI-Expanded)
- XXIV. **Coil-Less Fluxgate Effect in Negatively Magnetostrictive Co<sub>72.5</sub>Si<sub>12.5</sub>B<sub>15</sub> Amorphous Wire**  
ATALAY S., BAYRİ N., FIDAN A., YAGMUR V., İZGİ T., ATALAY F., KOLAT V. S.  
SENSOR LETTERS, vol.11, no.1, pp.195-198, 2013 (SCI-Expanded)
- XXV. **Electrical Transport and Magnetoresistance of La<sub>0.67</sub>Ca<sub>0.33</sub>MnO<sub>3</sub>: Ag-x (x=0, 0.1, 0.2, 0.3, 0.4) Composites**  
GENÇER H., PEKTAS M., Babur Y., KOLAT V. S., İZGİ T., ATALAY S.  
JOURNAL OF MAGNETICS, vol.17, no.3, pp.176-184, 2012 (SCI-Expanded)
- XXVI. **Magnetic and magnetocaloric properties of GdB<sub>2</sub> compound**  
GENÇER H., İZGİ T., KOLAT V. S., ATALAY S.  
OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS, vol.6, pp.875-878, 2012 (SCI-Expanded)
- XXVII. **Magnetic and Magnetocaloric Properties of (Gd<sub>1-x</sub>Ce<sub>x</sub>)Al<sub>2</sub> (x=0, 0.25, 0.5, 0.75) Compounds**  
GENÇER H., İZGİ T., KOLAT V. S., KAYA A., ATALAY S.  
JOURNAL OF MAGNETICS, vol.16, no.4, pp.337-341, 2011 (SCI-Expanded)
- XXVIII. **THE VARIATION OF EXCHANGE CONSTANT AND MAGNETOCALORIC EFFECT IN LaFe<sub>13-x</sub>Si<sub>x</sub> (x=1.6, 1.9 AND 2.2) COMPOUNDS**  
İZGİ T., KOLAT V. S., GENÇER H., ATALAY S.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.25, no.25, pp.3303-3313, 2011 (SCI-Expanded)
- XXIX. **Magnetotransport and magnetoresistance properties of Pr<sub>0.68</sub>Ca<sub>0.32-x</sub>Sr<sub>x</sub>MnO<sub>3</sub> (x=0, 0.1, 0.18, 0.26 and 0.32) manganites**  
İZGİ T., KOLAT V. S., BAYRİ N., KAYA A., GENÇER H., ATALAY S.  
JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS, vol.13, pp.648-655, 2011 (SCI-Expanded)
- XXX. **SIZE-INDUCED EFFECTS IN NANOSTRUCTURED NiFe<sub>2</sub>O<sub>4</sub>**  
GÜNEŞ M., GENÇER H., İZGİ T., KOLAT V. S., ATALAY S.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.24, no.30, pp.5973-5985, 2010 (SCI-Expanded)
- XXXI. **Influence of the wire length on the of coil-less fluxgate properties of amorphous (Co<sub>0.94</sub>Fe<sub>0.06</sub>) (72.5)Si<sub>12.5</sub>B<sub>15</sub> wire**  
ATALAY S., BAYRİ N., İZGİ T., YAGMUR V., ATALAY F., KOLAT V. S.  
SENSORS AND ACTUATORS A-PHYSICAL, vol.163, no.1, pp.122-127, 2010 (SCI-Expanded)
- XXXII. **Influence of Ge and Bi substitution on the magnetic and magnetocaloric properties of LaFe<sub>11.4</sub>Si<sub>1.6</sub>**  
KOLAT V. S., KAYA A., İZGİ T., GENÇER H., BAYRİ N., ATALAY S.  
JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS, vol.12, no.5, pp.1129-1134, 2010 (SCI-Expanded)

- XXXIII. **Coil-less fluxgate effect in amorphous wires**  
ATALAY S., BAYRI N., İZGİ T., ATALAY F., KOLAT V. S.  
SENSORS AND ACTUATORS A-PHYSICAL, vol.158, no.1, pp.37-42, 2010 (SCI-Expanded)
- XXXIV. **Metamagnetic transition and magnetocaloric effect in charge-ordered Pr<sub>0.68</sub>Ca<sub>0.32</sub>-xSr<sub>x</sub>MnO<sub>3</sub> (x=0, 0.1, 0.18, 0.26 and 0.32) compounds**  
KOLAT V. S., İZGİ T., KAYA A., BAYRI N., GENÇER H., ATALAY S.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.322, no.4, pp.427-433, 2010 (SCI-Expanded)
- XXXV. **Magnetic and magnetoimpedance properties of Mn-doped FINEMET**  
KOLAT V. S., BAYRI N., MICHALIK S., İZGİ T., SOVAK P., ATALAY F., GENÇER H., ATALAY S.  
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.355, pp.2562-2566, 2009 (SCI-Expanded)
- XXXVI. **Effect of tensile stress on magnetoimpedance properties of CoNiFe/Cu wire**  
BAYRI N., KOLAT V. S., KAYA H., ATALAY F., İZGİ T., ATALAY S.  
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.42, no.17, 2009 (SCI-Expanded)
- XXXVII. **Production of LaFe<sub>11.4</sub>Si<sub>1.6</sub> compound at high temperature with a very short annealing time**  
KOLAT V. S., İZGİ T., GENÇER H., KAYA A., BAYRI N., ATALAY S.  
JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS, vol.11, no.8, pp.1106-1110, 2009 (SCI-Expanded)
- XXXVIII. **Magnetic and electrical properties of La<sub>0.67</sub>Ca<sub>0.33</sub>Mn<sub>0.9</sub>V<sub>0.1</sub>O<sub>3</sub> two-phase composite**  
KOLAT V. S., Gencer H., ATALAY S.  
PHYSICA B-CONDENSED MATTER, vol.371, no.2, pp.199-204, 2006 (SCI-Expanded)
- XXXIX. **Magnetic entropy change in Fe<sub>74-x</sub>Cr<sub>x</sub>Cu<sub>1</sub>Nb<sub>3</sub>Si<sub>13</sub>B<sub>9</sub> (x=14 and 17) amorphous alloys**  
ATALAY S., Gencer H., KOLAT V. S.  
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.351, pp.2373-2377, 2005 (SCI-Expanded)
- XL. **Magnetocaloric effect in the La<sub>0.62</sub>Bi<sub>0.05</sub>Ca<sub>0.33</sub>MnO<sub>3</sub> compound**  
Gencer H., ATALAY S., ADIGUZEL H. İ., KOLAT V. S.  
PHYSICA B-CONDENSED MATTER, vol.357, pp.326-333, 2005 (SCI-Expanded)
- XLI. **The effect of furnace annealing and surface crystallization on the anisotropy, Delta E and magnetoimpedance effects in Fe<sub>71</sub>Cr<sub>7</sub>Si<sub>9</sub>B<sub>13</sub> amorphous wires**  
Bayri N., KOLAT V. S., Atalay F., ATALAY S.  
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.37, no.22, pp.3067-3072, 2004 (SCI-Expanded)
- XLII. **Effect of hydrogen charging on the electrochemical and magnetic properties of Fe<sub>73.5</sub>M<sub>1</sub>Nb<sub>3</sub>Si<sub>13.5</sub>B<sub>9</sub> (M = Cu, Pt, Pd, Ag, Mn) alloys**  
KOLAT V. S., TURKDEMİR H., Adiguzel H. İ., Atalay F., ATALAY S., SOVAK P.  
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH, vol.189, no.3, pp.817-820, 2002 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Al-Si-Mg Foam Produced by 3D Printer**  
ATALAY S., BAYRI N., KAYA H., İZGİ T., KOLAT V. S.  
Adiyaman University Journal of Science, vol.8, no.1, pp.13-23, 2018 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Surface Modification Of Yıg By Magnet Array,**  
BAKIR H. G., KOLAT V. S., İZGİ T., KAYA A. O., KAYA O. A., GENÇER H., ATALAY S.  
European Conference On Surface Science, 31 August - 04 September 2014

## Supported Projects

KOLAT V. S., Project Supported by Higher Education Institutions, Ti ( Fe1.7 v 0.3) ve Ti09Y01(Fe1.7 v 0.3)  
NUMUNELERİNİN YAPISAL, MANYETİK VE MANYETOKALORİK ÖZELLİKLERİ, 2016 - Continues  
İZGİ T., ATALAY S., KOLAT V. S., Project Supported by Higher Education Institutions, Pr067Ca033Mn1XAXO3 ARu  
x000050102 numunelerinde farklı oranlarda Ru katkılmasının yapısal manyetik ve manyetokalorik özelliklerinin  
İncelenmesi, 2021 - 2023  
ATALAY S., KOLAT V. S., İZGİ T., ULU A., DİK G., Project Supported by Higher Education Institutions, Mikro Manyetoelastik  
Sensör Üretimi ve İmmünoşensor Uygulaması, 2021 - 2022  
ATALAY S., İZGİ T., ERDEMOĞLU S., KOLAT V. S., Project Supported by Higher Education Institutions, TiO2 kaplanmış  
kuartz mikro terazi QCM ile Nem hidrojen ve NO2 dedektasyonu, 2019 - 2020  
GENÇER H., ATALAY S., İZGİ T., KOLAT V. S., Project Supported by Higher Education Institutions, Pr06Ca04Mn1xAxO3 ve  
Pr06Ca04Mn1xAxO3 A Ru ve Au numunelerinin manyetik ve manyetokalorik özelliklerinin incelenmesi, 2019 - 2020  
ATALAY S., KAYA H., İZGİ T., KOLAT V. S., Project Supported by Higher Education Institutions, Ultra Hassas Manyetik Alan  
Sensörü, 2018 - 2019  
İZGİ T., BAYRİ N., KOLAT V. S., Project Supported by Higher Education Institutions, LaXMnO Bi Cr Ca vs numunelerin  
yapısal manyetik ve manyetokalorik özelliklerinin belirlenmesi, 2017 - 2019  
İZGİ T., KOLAT V. S., ATALAY S., KAYA H., Project Supported by Higher Education Institutions, La094Bi006Mn1xAxO3 ACr  
Co Fe Ni Ag vs numunelerin yapısal manyetik ve manyetokalorik özelliklerinin belirlenmesi, 2017 - 2018  
İZGİ T., KOLAT V. S., TUBİTAK Project, TUBİTAK 4006 Bilim Fuarı, 2016 - 2017

## Metrics

Publication: 44

Citation (WoS): 472

Citation (Scopus): 377

H-Index (WoS): 10

H-Index (Scopus): 10