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Education Information

Doctorate, Gebze Technical University, Institute Of Science, Fizik, Turkey 2006 - 2012

Postgraduate, Gebze Technical University, Institute Of Science, Fizik, Turkey 2003 - 2006

Undergraduate, Inonu University, Fen Edebiyat Fakültesi, Fizik, Turkey 1999 - 2003

Dissertations

Doctorate, Nanoyapılandırılmış TiO₂ / Ftalosiyanin heteroyapılarının elektronik özelliklerinin incelenmesi, gaz sensör ve fotoiletkenlik uygulamalarının araştırılması, 2012

Postgraduate, Ftalosiyaninlerin empedans spektroskopisi yöntemiyle karakterize edilmesi, 2006

Research Areas

Physics, Atomic and Molecular Physics, Theory of Atoms and Molecules, Interdisciplinary Physics and Related Science and Technology Areas, Electronic and magnetic devices, microelectronics, Materials Science, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Electrical properties of electronic structures, interfaces, thin films and low-dimensional structures, Natural Sciences

Academic Titles / Tasks

Associate Professor, Inonu University, Fen-Edebiyat Fakültesi, Fizik, 2020 - Continues

Associate Professor, Nigde Omer Halisdemir University, Faculty Of Engineering, Department Of Mechatronics Engineering, 2016 - 2020

Assistant Professor, Nigde Omer Halisdemir University, Faculty Of Engineering, Department Of Mechatronics Engineering, 2014 - 2016

Research Assistant, Gebze Technical University, Faculty Of Basic Sciences, Department Of Physics, 2004 - 2014

Courses

Dinamik, Undergraduate, 2014-2015
Temel Elektrik Elektronik, Undergraduate, 2014-2015
Diferansiyel Denklemler, Undergraduate, 2014-2015
Nümerik Analiz, Undergraduate, 2014-2015
Temel Bilgisayar, Undergraduate, 2014-2015

Advising Theses

Kılınç N., Öztürk Z. Z., Fabrication of organic/p-type semiconducting metal oxide hybrid structures for gas sensing applications, Postgraduate, O.ŞİŞMAN(Student), 2016
Kılınç N., Erkovan M., Fabrication and characterization of nanostructured Pt and Pt-Ag alloys, and investigation of their hydrogen gas sensing properties, Postgraduate, Ş.ÜRDEM(Student), 2016
Kılınç N., Öztürk Z. Z., Fabrication of one dimensional TiO₂ nanostructures modified with organic materials for device applications, Postgraduate, O.ALEV(Student), 2016

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **AAO-Assisted Nanoporous Platinum Films for Hydrogen Sensor Application**
Sener M., Sisman O., Kilinc N.
CATALYSTS, vol.13, no.3, pp.1-11, 2023 (SCI-Expanded)
- II. **Synthesis and analysis of TiO₂ nanotubes by electrochemical anodization and machine learning method for hydrogen sensors**
Isik E., Tasyurek L. B., IŞIK İ., KILINÇ N.
MICROELECTRONIC ENGINEERING, vol.262, 2022 (SCI-Expanded)
- III. **Platinum-Nickel alloy thin films for low concentration hydrogen sensor application**
KILINÇ N., SANDUVAÇ S., Erkovan M.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.892, 2022 (SCI-Expanded)
- IV. **Hybrid liquid crystalline zinc phthalocyanine@Cu₂O nanowires for NO₂ sensor application**
Sisman O., KILINÇ N., Akkus U. O., Sama J., Romano-Rodriguez A., ATİLLA D., GÜREK A. G., AHSEN V., BERBER S., ÖZTÜRK Z. Z.
SENSORS AND ACTUATORS B-CHEMICAL, vol.345, 2021 (SCI-Expanded)
- V. **Palladium and platinum thin films for low-concentration resistive hydrogen sensor: a comparative study**
KILINÇ N.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.32, no.5, pp.5567-5578, 2021 (SCI-Expanded)
- VI. **Adsorption of Phthalocyanines on Stoichiometric and Reduced Rutile TiO₂(110)**
KILINÇ N., ÖZTÜRK Z. Z., BERBER S.
ECS JOURNAL OF SOLID STATE SCIENCE AND TECHNOLOGY, vol.9, no.6, 2020 (SCI-Expanded)
- VII. **Electrical and NO(2)Sensing Properties of a Series of Liquid Crystalline Porphyrins**
KILINÇ N., AHSEN A. Ş., ÖZTÜRK Z. Z.
ECS JOURNAL OF SOLID STATE SCIENCE AND TECHNOLOGY, vol.9, no.6, 2020 (SCI-Expanded)
- VIII. **Integrated humidity sensor based on SU-8 polymer microdisk microresonator**
Eryurek M., Tasdemir Z., Karadag Y., Anand S., Kilinc N., Alaca B. E., Kiraz A.
SENSORS AND ACTUATORS B-CHEMICAL, vol.242, pp.1115-1120, 2017 (SCI-Expanded)
- IX. **Structural, electrical and H₂ sensing properties of copper oxide nanowires on glass substrate by anodization**

Sisman O., Kilinc N., Ozturk Z. Z.

SENSORS AND ACTUATORS B-CHEMICAL, vol.236, pp.1118-1125, 2016 (SCI-Expanded)

- X. **Sputtered platinum thin films for resistive hydrogen sensor application**
Sennik E., Urdem S., Erkovan M., Kilinc N.
MATERIALS LETTERS, vol.177, pp.104-107, 2016 (SCI-Expanded)
- XI. **Pd thin films on flexible substrate for hydrogen sensor**
Ozturk S., Kilinc N.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.674, pp.179-184, 2016 (SCI-Expanded)
- XII. **alpha-Thiophene end-capped styrene copolymer containing fullerene pendant moieties: Synthesis, characterization, and gas sensing properties**
Sennik E., Sennik B., Alev O., Kilinc N., Yilmaz F., Ozturk Z. Z.
JOURNAL OF APPLIED POLYMER SCIENCE, vol.133, no.27, 2016 (SCI-Expanded)
- XIII. **Poly(3-Methylthiophene) Thin Films Deposited Electrochemically on QCMs for the Sensing of Volatile Organic Compounds**
Ozturk S., Kosemen A., Sen Z., Kilinc N., Harbeck M.
SENSORS, vol.16, no.4, 2016 (SCI-Expanded)
- XIV. **Electrochemically growth of Pd doped ZnO nanorods on QCM for room temperature VOC sensors**
Ozturk S., Kosemen A., Kosemen Z. A., Kilinc N., Ozturk Z. Z., Penza M.
SENSORS AND ACTUATORS B-CHEMICAL, vol.222, pp.280-289, 2016 (SCI-Expanded)
- XV. **Precision density and viscosity measurement using two cantilevers with different widths**
Cakmak O., Ermek E., Kilinc N., Yaralioglu G. G., Urey H.
SENSORS AND ACTUATORS A-PHYSICAL, vol.232, pp.141-147, 2015 (SCI-Expanded)
- XVI. **Optical sensor for hydrogen gas based on a palladium-coated polymer microresonator**
Eryurek M., Karadag Y., Tasaltin N., Kilinc N., Kiraz A.
SENSORS AND ACTUATORS B-CHEMICAL, vol.212, pp.78-83, 2015 (SCI-Expanded)
- XVII. **A cartridge based sensor array platform for multiple coagulation measurements from plasma**
Cakmak O., Ermek E., Kilinc N., Bulut S., Baris I., Kavakli I. H., Yaralioglu G. G., Urey H.
LAB ON A CHIP, vol.15, no.1, pp.113-120, 2015 (SCI-Expanded)
- XVIII. **Electrochemical Growth of Pd Doped ZnO Nanorods**
Kosemen A., Kosemen Z. A., Ozturk S., Kilinc N., San S. E., Tunc A. V.
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.162, no.4, 2015 (SCI-Expanded)
- XIX. **Electrical and VOC sensing properties of anatase and rutile TiO₂ nanotubes**
Sennik E., Kilinc N., Ozturk Z. Z.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.616, pp.89-96, 2014 (SCI-Expanded)
- XX. **Fabrication of 1D ZnO nanostructures on MEMS cantilever for VOC sensor application**
Kilinc N., Cakmak O., Kosemen A., Ermek E., Ozturk S., Yerli Y., Ozturk Z. Z., Urey H.
SENSORS AND ACTUATORS B-CHEMICAL, vol.202, pp.357-364, 2014 (SCI-Expanded)
- XXI. **Electrical conduction and NO₂ gas sensing properties of ZnO nanorods**
Sahin Y., Ozturk S., Kilinc N., Kosemen A., Erkovan M., Ozturk Z. Z.
APPLIED SURFACE SCIENCE, vol.303, pp.90-96, 2014 (SCI-Expanded)
- XXII. **Hydrogen sensing properties of ZnO nanorods: Effects of annealing, temperature and electrode structure**
Ozturk S., Kilinc N., Torun I., Kosemen A., Sahin Y., Ozturk Z. Z.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.39, no.10, pp.5194-5201, 2014 (SCI-Expanded)
- XXIII. **Fabrication and gas sensing properties of C-doped and un-doped TiO₂ nanotubes**
Kilinc N., Sennik E., Isik M., Ahsen A. S., Ozturk O., Ozturk Z. Z.
CERAMICS INTERNATIONAL, vol.40, no.1, pp.109-115, 2014 (SCI-Expanded)
- XXIV. **Fabrication of ZnO nanorods for NO₂ sensor applications: Effect of dimensions and electrode position**
Ozturk S., Kilinc N., Ozturk Z. Z.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.581, pp.196-201, 2013 (SCI-Expanded)

- XXV. **Resistive Hydrogen Sensors Based on Nanostructured Metals and Metal Alloys**
Kilinc N.
NANOSCIENCE AND NANOTECHNOLOGY LETTERS, vol.5, no.8, pp.825-841, 2013 (SCI-Expanded)
- XXVI. **Effect of Ambient Atmosphere on Photoconductivity of TiO₂ Nanotube-CuPc Heterojunction**
Kilinc N., Sennik E., Atilla D., Gurek A. G., Ahsen V., Ozturk Z. Z.
SCIENCE OF ADVANCED MATERIALS, vol.5, no.4, pp.373-379, 2013 (SCI-Expanded)
- XXVII. **Electrical and NO₂ sensing properties of liquid crystalline phthalocyanine thin films**
Kilinc N., Ozturk S., Atilla D., Gurek A. G., Ahsen V., Ozturk Z. Z.
SENSORS AND ACTUATORS B-CHEMICAL, vol.173, pp.203-210, 2012 (SCI-Expanded)
- XXVIII. **Structural, electrical transport and NO₂ sensing properties of Y-doped ZnO thin films**
Kilinc N., Ozturk S., Arda L., ALTINDAL A., Ozturk Z. Z.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.536, pp.138-144, 2012 (SCI-Expanded)
- XXIX. **Fabrication of ZnO nanowires and nanorods**
Ozturk S., Kilinc N., Tasaltin N., Ozturk Z. Z.
PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES, vol.44, no.6, pp.1062-1065, 2012 (SCI-Expanded)
- XXX. **Fabrication of TiO₂ nanotubes by anodization of Ti thin films for VOC sensing**
Kilinc N., Sennik E., Ozturk Z. Z.
THIN SOLID FILMS, vol.520, no.3, pp.953-958, 2011 (SCI-Expanded)
- XXXI. **A comparative study on the NO₂ gas sensing properties of ZnO thin films, nanowires and nanorods**
Ozturk S., Kilinc N., Tasaltin N., Ozturk Z. Z.
THIN SOLID FILMS, vol.520, no.3, pp.932-938, 2011 (SCI-Expanded)
- XXXII. **Investigation of the hydrogen gas sensing properties of nanoporous Pd alloy films based on AAO templates**
Tasaltin N., Ozturk S., Kilinc N., Ozturk Z. Z.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.509, no.14, pp.4701-4706, 2011 (SCI-Expanded)
- XXXIII. **Fabrication of Pd-Fe nanowires with a high aspect ratio by AAO template-assisted electrodeposition**
Tasaltin N., Ozturk S., Kilinc N., Yuzer H., Ozturk Z. Z.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.509, no.9, pp.3894-3898, 2011 (SCI-Expanded)
- XXXIV. **Temperature-dependent H₂ gas-sensing properties of fabricated Pd nanowires using highly oriented pyrolytic graphite**
Sennik E., Kilinc N., Ozturk Z. Z.
JOURNAL OF APPLIED PHYSICS, vol.108, no.5, 2010 (SCI-Expanded)
- XXXV. **Fabrication of vertically aligned Pd nanowire array in AAO template by electrodeposition using neutral electrolyte**
Tasaltin N., Ozturk S., Kilinc N., Yuzer H., Ozturk Z. Z.
NANOSCALE RESEARCH LETTERS, vol.5, no.7, pp.1137-1143, 2010 (SCI-Expanded)
- XXXVI. **Synthesis of highly-ordered TiO₂ nanotubes for a hydrogen sensor**
Sennik E., Colak Z., Kilinc N., Ozturk Z. Z.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.35, no.9, pp.4420-4427, 2010 (SCI-Expanded)
- XXXVII. **Structure and electrical properties of Mg-doped ZnO nanoparticles**
Kilinc N., Arda L., Ozturk S., Ozturk Z. Z.
CRYSTAL RESEARCH AND TECHNOLOGY, vol.45, no.5, pp.529-538, 2010 (SCI-Expanded)
- XXXVIII. **Fabrication of ZnO nanowires at room temperature by cathodically induced sol-gel method**
Ozturk S., Tasaltin N., Kilinc N., Yuzer H., Ozturk Z. Z.
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.99, no.1, pp.73-78, 2010 (SCI-Expanded)
- XXXIX. **Temperature dependence of a nanoporous Pd film hydrogen sensor based on an AAO template on Si**
Tasaltin N., Ozturk S., Kilinc N., Ozturk Z. Z.
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.97, no.4, pp.745-750, 2009 (SCI-Expanded)
- XL. **Volatile organic compounds sensing properties of tetrakis(alkylthio)-substituted lutetium(III) bisphthalocyanines thin films**
Kilinc N., Atilla D., Guerek A. G., Ozturk Z. Z., Ahsen V.

TALANTA, vol.80, no.1, pp.263-268, 2009 (SCI-Expanded)

- XLI. Recent studies chemical sensors based on phthalocyanines**
Ozturk Z. Z., Kilinc N., Atilla D., Gurek A. G., Ahsen V.
JOURNAL OF PORPHYRINS AND PHTHALOCYANINES, vol.13, no.11, pp.1179-1187, 2009 (SCI-Expanded)
- XLII. Tetrakis(alkylthio)-substituted lutetium bisphthalocyanines for sensing NO₂ and O-3**
Kilinc N., Atilla D., Gurek A. G., Ozturk Z. Z., Ahsen V.
SENSORS AND ACTUATORS B-CHEMICAL, vol.142, no.1, pp.73-81, 2009 (SCI-Expanded)
- XLIII. Oxidizing gas sensing properties of mesogenic copper octakisalkylthiophthalocyanine chemoresistive sensors**
Kilinc N., Atilla D., Ozturk S., Gurek A. G., Ozturk Z. Z., Ahsen V.
THIN SOLID FILMS, vol.517, no.22, pp.6206-6210, 2009 (SCI-Expanded)
- XLIV. Simple fabrication of hexagonally well-ordered AAO template on silicon substrate in two dimensions**
Tasaltin N., Ozturk S., Kilinc N., Yuezzer H., Ozturk Z. Z.
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.95, no.3, pp.781-787, 2009 (SCI-Expanded)
- XLV. Synthesis, characterization, mesomorphic and electrical properties of tetrakis(alkylthio)-substituted lutetium(III) bisphthalocyanines**
Atilla D., Kilinc N., Yuksel F., Gurek A. G., Ozturk Z. Z., Ahsen V.
SYNTHETIC METALS, vol.159, pp.13-21, 2009 (SCI-Expanded)
- XLVI. Electrical Properties of Mesomorphic Phthalocyanine-Carbon Nanotube Composites**
Kilinc N., Ahsen A. S., Atilla D., Guerek A. G., San S. E., Oeztuerk Z. Z., Ahsen V.
SENSOR LETTERS, vol.6, no.4, pp.607-612, 2008 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. Optical Sensor for Humidity and Hydrogen Gas Based on Polymer Microresonators**
Kiraz A., Eryurek M., Tasdemir Z., Karadag Y., Anand S., Kilinc N., Alaca B. E.
Progress in Electromagnetic Research Symposium (PIERS), Shanghai, China, 8 - 11 August 2016, pp.2617
- II. Catalytic thin film on flexible substrate for hydrogen sensor**
KILINÇ N.
2nd International Nanoscience and Nanotechnology for Next Generation Conference (NaNONG) 2015, 29 - 31 October 2015
- III. The effect of anodization parameters on formation of porous anodic aluminum oxide**
Sanduvaç S., KILINÇ N.
2nd International Nanoscience and Nanotechnology for Next Generation Conference (NaNONG) 2015, 29 - 31 October 2015
- IV. Hydrogen and Humidity Sensing Based on WGMs of Elastic Polymer Optical Microresonators**
Eryürek M., KARADAĞ Y., ANAND S., KILINÇ N., KIRAZ A.
Progress In Electromagnetics Research Symposium PIERS 2015, 6 - 09 July 2015
- V. Hydrogen gas sensing using palladium-coated microdisk microresonators**
Eryurek M., Karadag Y., Tasaltin N., Kilinc N., Kiraz A.
Conference on Laser Resonators, Microresonators, and Beam Control XVII, San-Francisco, Costa Rica, 9 - 12 February 2015, vol.9343
- VI. H-2 sensing properties of Cu₂O nanowires on glass substrate**
Sisman O., Kilinc N., Ozturk Z. Z.
Conference on EUROSENSORS, Freiburg, Germany, 6 - 09 September 2015, vol.120, pp.1170-1174
- VII. TWO CANTILEVER BASED SYTEM FOR VISCOSITY AND DENSITY MONITORING**
Cakmak O., Ermek E., Kilinc N., Yaralioglu G. G., Urey H.
International Conference on Optical MEMS and Nanophotonics (OMN), Jerusalem, Israel, 2 - 05 August 2015
- VIII. Gas sensor application of hydrothermally growth TiO₂ nanorods**
Alev O., Sennik E., Kilinc N., Ozturk Z. Z.

Conference on EUROSENSORS, Freiburg, Germany, 6 - 09 September 2015, vol.120, pp.1162-1165

- IX. Microcantilever based loc system for coagulation measurements**
Cakmak O., Ermek E., Kilinc N., Baris I., Kavakli I., Yaralioglu G., Urey H.
18th International Conference on Miniaturized Systems for Chemistry and Life Sciences, MicroTAS 2014, Texas, United States Of America, 26 - 30 October 2014, pp.2050-2052
- X. LoC SENSOR ARRAY PLATFORM FOR REAL-TIME COAGULATION MEASUREMENTS**
Cakmak O., Kilinc N., Ermek E., Mostafazadeh A., Elbuken C., Yaralioglu G. G., Urey H.
27th IEEE International Conference on Micro Electro Mechanical Systems (MEMS), San-Francisco, Costa Rica, 26 - 30 January 2014, pp.330-333
- XI. MEMS Based Blood Plasma Viscosity Sensor Without Electrical Connections**
Cakmak O., Ermek E., Urey H., Yaralioglu G. G., Kilinc N.
12th IEEE Sensors Conference, Maryland, United States Of America, 3 - 06 November 2013, pp.853-856
- XII. A VOC sensor based on micromechanical cantilever functionalized with ZNO nanorods**
Kilinc N., Cakmak O., Kosemen A., Ermek E., Ozturk S., Yerli Y., Ozturk Z., Urey H.
17th International Conference on Miniaturized Systems for Chemistry and Life Sciences, MicroTAS 2013, Freiburg, Germany, 27 - 31 October 2013, vol.3, pp.1529-1531
- XIII. The Effects of Annealing on Gas Sensing Properties of ZnO Nanorod Sensors Coated with Pd and Pt**
Ozturk S., Kilinc N., Ozturk Z. Z.
26th European Conference on Solid-State Transducers (Euroensors), Krakow, Poland, 9 - 12 September 2012, vol.47, pp.434-437

Supported Projects

KILINÇ N., BOYRAZ Z., Project Supported by Higher Education Institutions, Platin Nanotüp Üretimi Karakterizasyonu ve Gaz Algılama Özelliklerinin İncelenmesi, 2022 - 2023

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