

## Prof. NIZAMI HASANLI

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### Biography

#### C U R R I C U L U M V I T A E

**Nizami Mamed oglu Hasanli**

Professor , Doctor

#### *PERMANENT*

**ADDRESS :** Physics Department , Baku State University

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#### *PRESENT*

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**PERSONAL:** Born September 15, 1941, Bolnisi, Republic of Georgia

Nationality : Azerbaijanian

**EDUCATION:** Baku State University , Physics Department , 1958-1963

Post-Graduate Studentship - Physico-Technical Institute, USSR Academy of Sciences , Leningrad , 1968-1972

**Cand. Sci. Thesis:** Physico-Technical Institute, USSR Academy of Sciences , 1972

**Thesis Title:** " Vibrational Spectrum and Absorption Edge of Solid Solutions on the Basis of InSb "

**Doctor Sci. Thesis:** Institute of Physics , Azerbaijan Academy of Sciences , 1986

**Thesis Title:** " Spectroscopy of Optical Vibrational States of A<sup>3</sup>B<sup>6</sup>-Type Anisotropic Semiconductive Crystals "

## **PROFESSIONAL**

**POSITIONS:** Research Assistant , Physics Department ,  
Baku State University , 1964-1967

Post-Graduate Student , Physico-Technical Institute ,  
USSR Academy of Sciences , Leningrad , 1968-1972

Teacher, Senior Teacher , Associate-Professor , Professor ,  
Physics Department , Baku State University , 1972-1991

Vice-Dean, Physics Department , Baku State University ,  
1989-1991

Visiting Professor , Physics Department ,  
Middle East Technical University , Ankara , 1992 - present time

## **SCIENTIFIC WORK**

## **IN THE FOREIGN**

**UNIVERSITIES:** Institute of Physics II - Solid State Physics ,  
University of Regensburg , Regensburg , Germany , 1984

Wihuri Physical Laboratory , University of Turku ,  
Turku , Finland , 1991

## **TOTAL NUMBER OF INTERNATIONAL PUBLICATIONS**

( Web of Science, SCI ) : **366 papers**

## **Research Areas**

Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties

## **Advising Theses**

HASANLI N., Low temperature thermoluminescence study of some ternary and quaternary layered structured semiconductors, Doctorate, S.DELİCE(Student), 2016

HASANLI N., Optical and electrical characterization of Ga<sub>0.75</sub>In<sub>0.25</sub>Se layered single crystals, Doctorate, M.İşık(Student), 2013

HASANLI N., Optical and electrical transport properties of some quaternary thallium dichalcogenides, Doctorate, İ.Güler(Student), 2011

HASANLI N., Thermally stimulated current study of traps distribution in TiGaSeS layered single crystals, Postgraduate, H.Nasser(Student), 2010

HASANLI N., Optical properties of some quaternary thallium chalcogenides, Doctorate, K.Gökşen(Student), 2008

HASANLI N., Low temperature photoluminescence study in GaS-GaSe layered crystals., Postgraduate, K.Gökşen(Student), 2002

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

- I. **Thermoluminescence dose response and kinetic parameters of Gd-doped ZnO nanoparticles**  
Isik M., Yildirim T., Guner M., Hasanlı N.  
PHYSICA SCRIPTA, vol.99, no.7, 2024 (SCI-Expanded)
- II. **Revealing photoluminescence and nonlinear optical absorption characteristics of PbMo<sub>0.75</sub>W<sub>0.25</sub>O<sub>4</sub> single crystal for optical limiting applications**  
Doğan A., Karatay A., Isik M., Yıldız E., Hasanlı N., Elmalı A.  
Physica Scripta, vol.99, no.5, 2024 (SCI-Expanded)
- III. **Temperature-dependent tuning of band gap of Fe<sub>3</sub>O<sub>4</sub> nanoparticles for optoelectronic applications**

Delice S., Isik M., HASANLI N.

Chemical Physics Letters, vol.840, 2024 (SCI-Expanded)

- IV. **Revealing defect centers in  $\text{PbWO}_4$  single crystals using thermally stimulated current measurements**  
Isik M., HASANLI N.  
JOURNAL OF APPLIED PHYSICS, vol.135, no.8, 2024 (SCI-Expanded)
- V. **Characterization of linear and nonlinear optical properties of  $\text{NaBi}(\text{WO}_4)_2$  crystal by spectroscopic ellipsometry**  
Isik M., Guler I., HASANLI N.  
Optical Materials, vol.148, 2024 (SCI-Expanded)
- VI. **Growth and optical properties of  $(\text{Na}_{0.5}\text{Bi}_{0.5})(\text{Mo}_{1-x}\text{W}_x)\text{O}_4$  ( $x = 0.25$ ) single crystal: a potential candidate for optoelectronic devices**  
Guler I., Isik M., HASANLI N.  
Optical and Quantum Electronics, vol.56, no.1, 2024 (SCI-Expanded)
- VII. **Exploring the linear and nonlinear optical behavior of  $(\text{TlInS}_2)_{0.75}(\text{TlInSe}_2)_{0.25}$ : Insights from ellipsometry measurements**  
Isik M., Guler I., Hasanli N.  
Physica B: Condensed Matter, vol.669, 2023 (SCI-Expanded)
- VIII. **Temperature-dependent optical properties of  $\text{TiO}_2$  nanoparticles: a study of band gap evolution**  
Isik M., Delice S., HASANLI N.  
Optical and Quantum Electronics, vol.55, no.10, 2023 (SCI-Expanded)
- IX. **Growth and temperature-tuned band gap characteristics of  $\text{LiGd}(\text{MoO}_4)_2$  single crystals for optoelectronic applications**  
Delice S., Isik M., HASANLI N., Darvishov N., Bagiev V.  
Ceramics International, vol.49, no.15, pp.25840-25847, 2023 (SCI-Expanded)
- X. **Temperature-dependent current-voltage characteristics of  $\text{p-GaSe}_{0.75}\text{S}_{0.25}/\text{n-Si}$  heterojunction**  
Isik M., Surucu O., HASANLI N.  
Applied Physics A: Materials Science and Processing, vol.129, no.8, 2023 (SCI-Expanded)
- XI. **Tunable nonlinear absorption and optical limiting behavior of  $\text{NaBi}(\text{Mo}_x\text{W}_{1-x}\text{O}_4)_2$  single crystals with ratio of Molybdenum/Tungsten**  
PEPE Y., YILDIZ E., Isik M., KARATAY A., Gasanly N., ELMALI A.  
PHYSICA SCRIPTA, vol.98, no.7, 2023 (SCI-Expanded)
- XII. **Optical characterization of  $(\text{TlInS}_2)_{0.5}(\text{TlInSe}_2)_{0.5}$  crystal by ellipsometry: linear and optical constants for optoelectronic devices**  
Guler I., Isik M., HASANLI N.  
Journal of Materials Science: Materials in Electronics, vol.34, no.17, 2023 (SCI-Expanded)
- XIII. **Spectroscopic ellipsometry studies of optical properties of  $\text{TlIn}(\text{S}_{0.25}\text{Se}_{0.75})_2$  crystal**  
Guler I., Isik M., HASANLI N.  
Applied Physics A: Materials Science and Processing, vol.129, no.6, 2023 (SCI-Expanded)
- XIV. **Temperature dependence of band gap of  $\text{CeO}_2$  nanoparticle photocatalysts**  
Isik M., Delice S., HASANLI N.  
Physica E: Low-Dimensional Systems and Nanostructures, vol.150, 2023 (SCI-Expanded)
- XV. **Excitation wavelength dependent nonlinear absorption mechanisms and optical limiting properties of  $\text{Bi}_{12}\text{SiO}_{20}$  single crystal**  
Doğan A., KARATAY A., Isik M., PEPE Y., HASANLI N., ELMALI A.  
Optical Materials, vol.140, 2023 (SCI-Expanded)
- XVI. **Growth and characterization of  $\text{NaBi}(\text{Mo}_{0.5}\text{W}_{0.5}\text{O}_4)_2$  single crystal: A promising material for optoelectronic applications**  
Isik M., Guler I., HASANLI N.  
Materials Science in Semiconductor Processing, vol.156, 2023 (SCI-Expanded)
- XVII. **Growth and characterization of  $\text{PbMo}_{0.75}\text{W}_{0.25}\text{O}_4$  single crystal: A promising material for optical**

## **applications**

Isik M., HASANLI N., Darvishov N., Bagiev V.

Materials Chemistry and Physics, vol.296, 2023 (SCI-Expanded)

- XVIII. Growth and temperature tuned band gap characteristics of NaBi(MoO<sub>4</sub>)<sub>2</sub> single crystal**  
Isik M., Guler I., Hasanli N.  
Physica Scripta, vol.98, no.2, 2023 (SCI-Expanded)
- XIX. Linear and nonlinear optical properties of Bi<sub>12</sub>GeO<sub>20</sub> single crystal for optoelectronic applications**  
Isik M., HASANLI N.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.153, 2023 (SCI-Expanded)
- XX. Wavelength dependence of the nonlinear absorption performance and optical limiting in Bi<sub>12</sub>TiO<sub>20</sub> single crystal**  
PEPE Y., Isik M., KARATAY A., HASANLI N., ELMALI A.  
Journal of Luminescence, vol.253, 2023 (SCI-Expanded)
- XXI. Structural and optical properties of (TlInS<sub>2</sub>)<sub>0.75</sub>(TlInSe<sub>2</sub>)<sub>0.25</sub> thin films deposited by thermal evaporation**  
Guler I., Isik M., HASANLI N.  
Journal of Materials Science: Materials in Electronics, vol.34, no.3, 2023 (SCI-Expanded)
- XXII. Shallow trapping centers in Bi<sub>12</sub>GeO<sub>20</sub> single crystals by thermally stimulated current measurements**  
Delice S., Isik M., HASANLI N.  
Materials Today Communications, vol.33, 2022 (SCI-Expanded)
- XXIII. Investigation of linear and nonlinear optical properties of PbWO<sub>4</sub> single crystal**  
Delice S., Isik M., HASANLI N.  
Optical Materials, vol.133, 2022 (SCI-Expanded)
- XXIV. Temperature effects on optical characteristics of thermally evaporated CuSbSe<sub>2</sub> thin films for solar cell applications**  
Surucu O., Isik M., Terlemezoglu M., Bektas T., Hasanli N., Parlak M.  
Optical Materials, vol.133, 2022 (SCI-Expanded)
- XXV. The role of defects on the transition from saturable absorption to nonlinear absorption of Bi<sub>12</sub>GeO<sub>20</sub> single crystal under increasing laser excitation**  
PEPE Y., Isik M., KARATAY A., YILDIZ E., HASANLI N., ELMALI A.  
Journal of Luminescence, vol.251, 2022 (SCI-Expanded)
- XXVI. Nonlinear optical absorption characteristics of PbMoO<sub>4</sub> single crystal for optical limiter applications**  
PEPE Y., Isik M., KARATAY A., HASANLI N., ELMALI A.  
Optical Materials, vol.133, 2022 (SCI-Expanded)
- XXVII. Structural, morphological and temperature-tuned bandgap characteristics of CuS nano-flake thin films**  
Isik M., Terlemezoglu M., Hasanli N., Parlak M.  
Physica E: Low-Dimensional Systems and Nanostructures, vol.144, 2022 (SCI-Expanded)
- XXVIII. Linear and nonlinear optical characteristics of PbMoO<sub>4</sub> single crystal for optoelectronic applications**  
Delice S., Isik M., Hasanli N.  
Journal of Materials Science: Materials in Electronics, vol.33, no.28, pp.22281-22290, 2022 (SCI-Expanded)
- XXIX. Linear and nonlinear optical characteristics of Bi<sub>12</sub>SiO<sub>20</sub> single crystals**  
Isik M., HASANLI N.  
Optical Materials, vol.131, 2022 (SCI-Expanded)
- XXX. Spectroscopic ellipsometry characterization of PbWO<sub>4</sub> single crystals**  
Delice S., Isik M., HASANLI N., Darvishov N., Bagiev V.  
Optical Materials, vol.131, 2022 (SCI-Expanded)
- XXXI. Temperature-tuned optical bandgap of Al-doped ZnO spin coated nanostructured thin films**  
Isik M., HASANLI N.  
Materials Letters, vol.321, 2022 (SCI-Expanded)

- XXXII. **A method to predict temperature derivatives of the bulk modulus: A case study for HfB<sub>2</sub>**  
Özkan H., Delice S., HASANLI N.  
Physica Scripta, vol.97, no.8, 2022 (SCI-Expanded)
- XXXIII. **Investigation of optical characteristics of PbMoO<sub>4</sub> single crystals by spectroscopic ellipsometry**  
Delice S., Isik M., HASANLI N., Darvishov N., Bagiev V.  
Optik, vol.262, 2022 (SCI-Expanded)
- XXXIV. **Study of the structural and optical properties of thallium gallium disulfide (TlGaS<sub>2</sub>) thin films grown via thermal evaporation**  
Isik M., KARATAY A., Ech-Chergui A., HASANLI N.  
Physica Scripta, vol.97, no.7, 2022 (SCI-Expanded)
- XXXV. **Thermoluminescence characteristics of GaSe and Ga<sub>2</sub>Se<sub>3</sub> single crystals**  
Isik M., SARIGÜL N., HASANLI N.  
Journal of Luminescence, vol.246, 2022 (SCI-Expanded)
- XXXVI. **Temperature dependent bandgap in NaBi(WO<sub>4</sub>)<sub>2</sub> single crystals**  
Isik M., HASANLI N., Darvishov N., Bagiev V.  
Optik, vol.258, 2022 (SCI-Expanded)
- XXXVII. **Thermoluminescence properties and trapping parameters of TlGaS<sub>2</sub> single crystals**  
Delice S., Isik M., HASANLI N.  
Journal of Luminescence, vol.244, 2022 (SCI-Expanded)
- XXXVIII. **Effect of temperature on band gap of PbWO<sub>4</sub> single crystals grown by Czochralski method**  
Isik M., Hasanlı N., Darvishov N. H., Bagiev V. E.  
PHYSICA SCRIPTA, vol.97, no.4, 2022 (SCI-Expanded)
- XXXIX. **Structural and temperature-tuned band gap energy characteristics of PbMoO<sub>4</sub> single crystals**  
Isik M., HASANLI N., Darvishov N., Bagiev V.  
Optical Materials, vol.126, 2022 (SCI-Expanded)
- XL. **Determination of mechanical properties of Bi<sub>12</sub>TiO<sub>20</sub> crystals by nanoindentation**  
Isik M., HASANLI N., Rustamov F. A.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.140, 2022 (SCI-Expanded)
- XLI. **Structural and optical characteristics of thermally evaporated TlGaSe<sub>2</sub> thin films**  
Isik M., KARATAY A., HASANLI N.  
Optical Materials, vol.124, 2022 (SCI-Expanded)
- XLII. **Temperature-dependent optical characteristics of sputtered NiO thin films**  
Terlemezoglu M., Surucu O., Isik M., Hasanli N., Parlak M.  
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.128, no.1, 2022 (SCI-Expanded)
- XLIII. **Defect assisted nonlinear absorption and optical limiting in amorphous TlGaS<sub>2</sub>(1-x)Se<sub>2</sub>(x) (0 ≤ x ≤ 1) thin films**  
ÜNLÜ B. A., KARATAY A., Yildiz E. A., Dincbay T., ÜNVER H., Gasanly N., ELMALI A.  
JOURNAL OF LUMINESCENCE, vol.241, 2022 (SCI-Expanded)
- XLIV. **Investigation of defect levels in Bi<sub>12</sub>SiO<sub>20</sub> single crystals by thermally stimulated current measurements**  
Isik M., Delice S., HASANLI N.  
PHYSICA SCRIPTA, vol.96, no.12, 2021 (SCI-Expanded)
- XLV. **Trapping centers in Bi<sub>12</sub>TiO<sub>20</sub> single crystals by thermally stimulated current**  
Isik M., Delice S., HASANLI N., Darvishov N., Bagiev V.  
Optical Materials, vol.122, 2021 (SCI-Expanded)
- XLVI. **Experimental and theoretical investigation of the mechanical characteristics of sillenite compound: Bi<sub>12</sub>GeO<sub>20</sub>**  
SÜRÜCÜ G., Isik M., Gencer A., HASANLI N.  
Journal of Alloys and Compounds, vol.882, 2021 (SCI-Expanded)
- XLVII. **Effect of thallium (Tl) substitution for indium (In) on ellipsometric characteristics of TlInSe<sub>2</sub> single crystals**

- Isik M., HASANLI N.  
Materials Science in Semiconductor Processing, vol.134, 2021 (SCI-Expanded)
- XLVIII. **The effect of Zn concentration on the structural and optical properties of Cd<sub>1-x</sub>Zn<sub>x</sub>S nanostructured thin films**  
Isik M., Terlemezoglu M., Isik S., Erturk K., HASANLI N.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.32, no.20, pp.25225-25233, 2021 (SCI-Expanded)
- XLIX. **Evaluation of mechanical properties of Bi<sub>12</sub>SiO<sub>20</sub> sillenite using first principles and nanoindentation**  
Isik M., Sürücü G., Gencer A., Hasanlı N.  
PHILOSOPHICAL MAGAZINE, vol.101, no.20, pp.2200-2215, 2021 (SCI-Expanded)
- L. **Electronic, optical and thermodynamic characteristics of Bi<sub>12</sub>SiO<sub>20</sub> sillenite: First principle calculations**  
Isik M., SÜRÜCÜ G., Gencer A., HASANLI N.  
Materials Chemistry and Physics, vol.267, 2021 (SCI-Expanded)
- LI. **First principles study of Bi<sub>12</sub>GeO<sub>20</sub>: Electronic, optical and thermodynamic characterizations**  
Isik M., Sürücü G., Gencer A., Hasanlı N.  
Materials Today Communications, vol.27, 2021 (SCI-Expanded)
- LII. **Structural and temperature-tuned bandgap characteristics of thermally evaporated beta-In<sub>2</sub>S<sub>3</sub> thin films**  
Surucu O., Isik M., Terlemezoglu M., Hasanlı N., Parlak M.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.32, no.12, pp.15851-15856, 2021 (SCI-Expanded)
- LIII. **Defect characterization in Bi<sub>12</sub>GeO<sub>20</sub> single crystals by thermoluminescence**  
Delice S., Isik M., SARIGÜL N., HASANLI N.  
JOURNAL OF LUMINESCENCE, vol.233, 2021 (SCI-Expanded)
- LIV. **Investigation of traps distribution in GaS single crystals by thermally stimulated current measurements**  
Delice S., Isik M., HASANLI N.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.125, 2021 (SCI-Expanded)
- LV. **Optical and structural characteristics of electrodeposited Cd 1-xZn<sub>x</sub>S nanostructured thin films**  
Erturk K., Isik M., Terlemezoglu M., HASANLI N.  
Optical Materials, vol.114, 2021 (SCI-Expanded)
- LVI. **Spectroscopic ellipsometry study of Bi<sub>12</sub>TiO<sub>20</sub> single crystals**  
Isik M., Hasanlı N., Darvishov N. H., Bagiev V. E.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.32, no.6, pp.7019-7025, 2021 (SCI-Expanded)
- LVII. **Temperature effects on optical characteristics of CdSe thin films**  
Gullu H. H., Isik M., Surucu O., Hasanlı N., Parlak M.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.123, 2021 (SCI-Expanded)
- LVIII. **Structural and optical properties of thermally evaporated (GaSe)<sub>0.75</sub>-(GaS)<sub>0.25</sub> thin films**  
Isik M., Emir C., HASANLI N.  
OPTIK, vol.230, 2021 (SCI-Expanded)
- LIX. **Observation of in situ enhanced crystallization, negative resistance effect and photosensitivity in Ti<sub>2</sub>InGaSe<sub>4</sub> crystals**  
Qasrawi A. F., Irshaid T. M. A., HASANLI N.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.122, 2021 (SCI-Expanded)
- LX. **Optical and Nanomechanical Properties of Ga<sub>(2)</sub>Se<sub>(3)</sub>Single Crystals and Thin Films**  
Işık M., Emir C., Gullu H. H., Gasanlı N.  
JOM, vol.73, no.2, pp.558-565, 2021 (SCI-Expanded)
- LXI. **Temperature-dependent optical characteristics of sputtered Ga-doped ZnO thin films**  
Gullu H. H., Isik M., Hasanlı N., Parlak M.

MATERIALS SCIENCE AND ENGINEERING B-ADVANCED FUNCTIONAL SOLID-STATE MATERIALS, vol.263, 2021 (SCI-Expanded)

- LXII. **Temperature-tuned bandgap characteristics of Bi<sub>12</sub>TiO<sub>20</sub> sillenite single crystals**  
Isik M., Delice S., HASANLI N., Darvishov N. H., Bagiev V. E.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.32, no.1, pp.1316-1322, 2021 (SCI-Expanded)
- LXIII. **Optical characteristics of Bi<sub>12</sub>SiO<sub>20</sub> single crystals by spectroscopic ellipsometry**  
Isik M., Delice S., Nasser H., HASANLI N., Darvishov N. H., Bagiev V. E.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.120, 2020 (SCI-Expanded)
- LXIV. **Temperature-tuned band gap properties of MoS<sub>2</sub> thin films**  
Surucu O., Isik M., Gasanly N., Terlemezoglu M., Parlak M.  
MATERIALS LETTERS, vol.275, 2020 (SCI-Expanded)
- LXV. **TL and OSL studies on gallium sulfide (GaS) single crystals**  
Isik M., YÜKSEL M., TOPAKSU M., Gasanly N.  
JOURNAL OF LUMINESCENCE, vol.225, 2020 (SCI-Expanded)
- LXVI. **Vibrational modes in (TlGaS<sub>2</sub>)<sub>x</sub>-(TlGaSe<sub>2</sub>)<sub>(1-x)</sub> mixed crystals by Raman measurements: compositional dependence of the mode frequencies and line-shapes**  
Isik M., Terlemezoglu M., HASANLI N., Babayeva R. F.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.31, no.17, pp.14330-14335, 2020 (SCI-Expanded)
- LXVII. **Investigation of structural and optical characteristics of thermally evaporated Ga<sub>2</sub>Se<sub>3</sub> thin films**  
Isik M., Gasanly N.  
VACUUM, vol.179, 2020 (SCI-Expanded)
- LXVIII. **Temperature dependent band gap in SnS<sub>2x</sub>Se<sub>(2-2x)</sub> (x=0.5) thin films**  
Delice S., Isik M., Gullu H. H., Terlemezoglu M., Surucu O. B., Gasanly N., Parlak M.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.114, 2020 (SCI-Expanded)
- LXIX. **Thermoluminescence characteristics of Bi<sub>12</sub>SiO<sub>20</sub> single crystals**  
Isik M., SARIGÜL N., Gasanly N.  
JOURNAL OF LUMINESCENCE, vol.224, 2020 (SCI-Expanded)
- LXX. **Structural and temperature-tuned optical characteristics of Bi<sub>12</sub>GeO<sub>20</sub> sillenite crystals**  
Delice S., Isik M., Gasanly N., Darvishov N., Bagiev V.  
CHINESE JOURNAL OF PHYSICS, vol.66, pp.422-429, 2020 (SCI-Expanded)
- LXXI. **The effect of Ga/In ratio and annealing temperature on the nonlinear absorption behaviors in amorphous TlGa<sub>x</sub>In<sub>(1-x)</sub>S<sub>2</sub> (0 ≤ x ≤ 1) chalcogenide thin films**  
Ünlü B. A., Karatay A., Yüksek M., Ünver H., Gasanly N., Elmali A.  
Optics and Laser Technology, vol.128, 2020 (SCI-Expanded)
- LXXII. **Investigation of band gap energy versus temperature for SnS<sub>2</sub> thin films grown by RF-magnetron sputtering**  
Isik M., Gullu H. H., Terlemezoglu M., Surucu O. B., PARLAK M., Gasanly N.  
PHYSICA B-CONDENSED MATTER, vol.591, 2020 (SCI-Expanded)
- LXXIII. **Influence of temperature on optical properties of electron-beam-evaporated ZnSe thin film**  
Gullu H. H., Isik M., Gasanly N., PARLAK M.  
PHYSICA SCRIPTA, vol.95, no.7, 2020 (SCI-Expanded)
- LXXIV. **Investigation of optical properties of Bi<sub>12</sub>GeO<sub>20</sub> sillenite crystals by spectroscopic ellipsometry and Raman spectroscopy**  
Isik M., Delice S., Gasanly N., Darvishov N. H., Bagiev V. E.  
CERAMICS INTERNATIONAL, vol.46, no.9, pp.12905-12910, 2020 (SCI-Expanded)
- LXXV. **Structural and optical properties of thermally annealed thallium indium disulfide thin films**  
Guler I., Gasanly N.  
THIN SOLID FILMS, vol.704, 2020 (SCI-Expanded)
- LXXVI. **Temperature-dependent material characterization of CuZnSe<sub>2</sub> thin films**

- Gullu H. H., Surucu O., Terlemezoglu M., Isik M., Ercelebi C., Gasanly N., Parlak M.  
THIN SOLID FILMS, vol.701, 2020 (SCI-Expanded)
- LXXXVII. **Temperature -dependent optical and electrical characterization of Cu-Ga-S thin films and their diode characteristics on n-Si**  
Gullu H. H., Isik M., Gasanly N., PARLAK M.  
OPTIK, vol.208, 2020 (SCI-Expanded)
- LXXXVIII. **Synthesis and temperature-tuned band gap characteristics of magnetron sputtered ZnTe thin films**  
Isik M., Gullu H. H., PARLAK M., Gasanly N.  
PHYSICA B-CONDENSED MATTER, vol.582, 2020 (SCI-Expanded)
- LXXXIX. **Thermoluminescence characterization of (Ga<sub>2</sub>Se<sub>3</sub>)(0.25) - (Ga<sub>2</sub>S<sub>3</sub>)(0.75) single crystal compounds**  
Isik M., Guler I., Gasanly N.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.108, 2020 (SCI-Expanded)
- LXXX. **Optical constants and critical point energies of (AgInSe<sub>2</sub>)(0.75)-(In<sub>2</sub>Se<sub>3</sub>)(0.25) single crystals**  
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