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Education

Doctorate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Graduate School Of Natural And Applied Sciences, Turkey 2015 - 2020

Postgraduate, Ihsan Dogramaci Bilkent University, Institute Of Engineering And Natural Sciences, Turkey 2010 - 2013

Undergraduate, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Physics, Turkey 2005 - 2010

Dissertations

Postgraduate, Microfluidic based differential electrochemical sensors, Ihsan Dogramaci Bilkent University, Institute Of Engineering And Natural Sciences, 2013

Research Areas

Engineering and Technology

Academic Positions

Assistant Professor, Marmara University, Faculty of Technology, Mechatronic Engineering, 2020 - Continues

Lecturer, 2019 - 2020

Research Assistant, Piri Reis University, Faculty Of Arts And Sciences, 2015 - 2020

Journal articles indexed in SCI, SSCI, and AHCI

I. **A Novel Natural Fibers-Based Bio-composite Prepared from Silk Fibroin and Luffa Cylindrica**

AKAY SEFER Ö., Konuk Ege G., Saltik D., YÜCE H.

Journal of Polymers and the Environment, vol.33, no.3, pp.1459-1468, 2025 (SCI-Expanded)

II. **Calculation of the order parameter and dielectric susceptibility under the electric field near the incommensurate phase in NaNO₂ using Landau model**

YURTSEVEN H. H., AKAY SEFER Ö.

Philosophical Magazine, vol.105, no.3, pp.208-227, 2025 (SCI-Expanded)

- III. **Non-enzymatic Electrochemical Sensor Behaviors of Polyaniline: Silicene Nanocomposite-A Study on Sensitive and Selective Sensor Design against Glucose**
Baytemir G., AKAY SEFER Ö., Konuk Ege G., Taşaltın N.
Journal of the Electrochemical Society, vol.171, no.12, 2024 (SCI-Expanded)
- IV. **Temperature dependence of the frequency shifts related to the thermodynamic quantities close to phase transitions in NaNO₂**
YURTSEVEN H. H., AKAY SEFER Ö.
Phase Transitions, vol.97, no.10, pp.665-680, 2024 (SCI-Expanded)
- V. **Calculation of the Raman frequencies and thermodynamic quantities at high pressures for the cubic gauche nitrogen (cg-N)**
YURTSEVEN H. H., AKAY SEFER Ö.
Journal of Molecular Structure, vol.1294, 2023 (SCI-Expanded)
- VI. **A fabrication and characterization of luffa/PANI/PEO biocomposite nanofibers by means of electrospinning**
EGE G. K., YÜCE H., AKAY Ö., ÖNER H., GENÇ G.
PIGMENT & RESIN TECHNOLOGY, vol.52, no.1, pp.151-159, 2023 (SCI-Expanded)
- VII. **A chemosensitive based ammonia gas sensor with PANI/PEO- ZnO nanofiber composites sensing layer**
Konuk Ege G., AKAY SEFER Ö., YÜCE H.
Microelectronics International, 2023 (SCI-Expanded)
- VIII. **Preparation of a sustainable bio-copolymer based on Luffa cylindrica cellulose and poly(ϵ -caprolactone) for bioplastic applications**
AKAY Ö., Altınkök Ç., Acik G., YÜCE H., Ege G. K., GENÇ G.
International Journal of Biological Macromolecules, vol.196, pp.98-106, 2022 (SCI-Expanded)
- IX. **A bio-based and non-toxic polyurethane film derived from Luffa cylindrica cellulose and L-Lysine diisocyanate ethyl ester**
AKAY Ö., Altınkök Ç., Acik G., YÜCE H., Ege G. K.
European Polymer Journal, vol.161, 2021 (SCI-Expanded)
- X. **Investigation of vibrational, elastic and dielectric properties of cubic gauche nitrogen (cg-N)**
Akay Ö., YURTSEVEN H. H.
OPTIK, vol.236, 2021 (SCI-Expanded)
- XI. **Calculation of the inverse relaxation time and the activation energy as a function of temperature for the Raman modes close to the phase transitions in solid nitrogen**
YURTSEVEN H. H., Akay Ö.
JOURNAL OF MOLECULAR STRUCTURE, vol.1226, 2021 (SCI-Expanded)
- XII. **Calculation of the thermodynamic functions from the Raman frequency shifts close to the epsilon - delta(loc) - delta transitions and Pippard relations in nitrogen**
Akay Ö., YURTSEVEN H. H.
MODERN PHYSICS LETTERS B, vol.34, no.33, 2020 (SCI-Expanded)
- XIII. **Raman bandwidths calculated for the librational (α -phase) and internal (β , δ loc and δ phases) modes in solid N₂ using pseudospin-phonon coupling (PS) and energy-fluctuation (EF) models**
YURTSEVEN H. H., Akay Ö.
JOURNAL OF MOLECULAR STRUCTURE, vol.1217, 2020 (SCI-Expanded)
- XIV. **Calculation of the Raman frequency and linewidth of vibrons using anharmonic self energy model for the epsilon , delta(loc) and delta phases in solid nitrogen**
Akay Ö., YURTSEVEN H. H.
OPTIK, vol.219, 2020 (SCI-Expanded)
- XV. **CALCULATION OF THE THERMODYNAMIC FUNCTIONS USING A MEAN FIELD MODEL FOR THE FLUID-SOLID TRANSITION IN NITROGEN**
Akay Ö., YURTSEVEN H. H.

REVUE ROUMAINE DE CHIMIE, vol.65, no.5, pp.425-432, 2020 (SCI-Expanded)

- XVI. **Liquid-(Solid plus Liquid) Transitions in a Two-Component System of (CH₃)CCl₃ + CCl₄**
YURTSEVEN H. H., Akay Ö.
JOURNAL OF SOLUTION CHEMISTRY, vol.49, no.2, pp.195-209, 2020 (SCI-Expanded)
- XVII. **CALCULATION OF THE PHASE DIAGRAMS FOR THE FLUID-SOLID AND SOLID-SOLID ($\Delta\Delta(\text{loc})$ - ϵ) TRANSITIONS IN MOLECULAR NITROGEN BY USING MEAN FIELD MODEL**
YURTSEVEN H. H., Akay Ö.
REVUE ROUMAINE DE CHIMIE, vol.64, no.3, pp.249-258, 2019 (SCI-Expanded)
- XVIII. **Calculation of the Raman and IR frequencies from the volume data at high pressures in N-2**
Akay Ö., YURTSEVEN H. H.
OPTIK, vol.160, pp.227-233, 2018 (SCI-Expanded)
- XIX. **Analysis of the Raman Frequency Shifts for the Lattice Modes and Vibrons Related to the Thermodynamic Quantities in the eta Phase of Solid Nitrogen**
YURTSEVEN H. H., Akay Ö.
HIGH TEMPERATURE MATERIALS AND PROCESSES, vol.32, no.4, pp.383-389, 2013 (SCI-Expanded)

Articles Published in Other Journals

- I. **Characterization of Luffa-reinforced Polyaniline Films**
SEFER O. A.
Düzce Üniversitesi Bilim ve Teknoloji Dergisi, vol.13, no.1, pp.26-36, 2025 (Peer-Reviewed Journal)
- II. **The Characterization of Electrospun PANI/PEO Nanofibers at Different Electrospinning Conditions at Room Temperature**
KONUK EGE G., AKAY Ö., YÜCE H.
The International Journal of New Findings in Engineering, Science and Technology, vol.2, no.2, pp.91-97, 2024 (Peer-Reviewed Journal)
- III. **Calculation of the Thermodynamic Quantities for Cubic Gauche Nitrogen (cg-N)**
Yurtseven H., Akay Ö.
INTERNATIONAL JOURNAL OF THERMODYNAMICS, vol.25, no.3, pp.32-39, 2022 (ESCI)

Papers Presented at Peer-Reviewed Scientific Conferences

- I. **PRODUCTION OF CONDUCTIVE BIOPOLYMER NANOFIBERS BASED ON NATURAL FIBERS**
Akay Sefer Ö.
ASES VIII. INTERNATIONAL HEALTH ENGINEERING AND SCIENCES CONFERENCE, İzmir, Turkey, 13 April - 14 June 2024, pp.189-190, (Summary Text)
- II. **The characterization of electrospun PANI/PEO nanofibers at different electrospinning conditions at room temperature**
Ege G. K., Akay Ö., Yüce H.
International conference on engineering technologies, Konya, Turkey, 17 - 19 November 2022, pp.1-4, (Full Text)
- III. **PREPARATION AND CHARACTERIZATION OF LNF/PANI/PEO BIO-COMPOSITE BASED ON LUFFA CYLINDRICA**
Akay Ö., Ege G. K., Yüce H.
25. Sıvı Hal Sempozyumu, İstanbul, Turkey, 27 May 2022, pp.18, (Summary Text)

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