

# Prof. MEHMET ERTUĞRUL

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## Education Information

Doctorate, Ataturk University, Fen Bilimleri Enstitüsü, Fizik Anabilim Dalı, Turkey 1990 - 1994

Postgraduate, Ataturk University, Fen Bilimleri Enstitüsü, Fizik Anabilim Dalı, Turkey 1988 - 1990

Undergraduate, Ataturk University, Kâzım Karabekir Eğitim Fakültesi, Turkey 1982 - 1986

## Research Areas

Engineering and Technology

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

- I. **Graphene/Al2O3/Si Schottky diode with integrated waveguide on a silicon-on-insulator wafer**  
Seven E., ORHAN E., Di Bartolomeo A., ERTUĞRUL M., Taştekin N. A.  
Indian Journal of Physics, vol.98, no.8, pp.2795-2803, 2024 (SCI-Expanded)
- II. **Investigation of hybrid wires combining superconductive MgB2 and ultra-conductive Graphene/Cu sheath**  
Karaboga F., Farhangmehr M., Özmen A., Yetis H., Belenli I., ERTUĞRUL M.  
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- III. **Photoluminescence enhancement of chemical vapor-deposited MoSe2 monolayers**  
KOPAR A. S., Coşkun A., Çağlar M., ERTUĞRUL M., Turgut G.  
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- IV. **A Study of Nanostructured FeO Thin Film-Based Allure Red and Direct Blue 15 Azo Dyes Sensing Scheme**  
Gunduz S., Alayli A., GÜNEY H., ÇOBAN Ö., ERTUĞRUL M., NADAROĞLU H.  
Journal of Nano Research, vol.82, pp.21-32, 2024 (SCI-Expanded)
- V. **Rational design of MXene/Boron Carbon Nitride nanotube composite electrode for supercapacitors with improved electrochemical properties**  
TUZLUCA YEŞİLBAĞ F. N., YEŞİLBAĞ Y. Ö., Huseyin A., Salih A. J. S., Ertugrul M.  
JOURNAL OF ENERGY STORAGE, vol.72, 2023 (SCI-Expanded)
- VI. **Analyses of Cu impurity effects on the USP grown MgO thin films: Structural, optical and photocatalytic assessments**

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- VII. **Ta<sub>4</sub>C<sub>3</sub> MXene-based clover-shaped patch antenna for the treatment of lung cancer with TWA**  
GEYİKOĞLU M. D., Ertugrul M.  
OPTICAL AND QUANTUM ELECTRONICS, vol.55, no.12, 2023 (SCI-Expanded)
- VIII. **Extraction Method for Unique Determination of Complex Permittivity from Graphical Analysis of Natural Frequencies**  
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IEEE Transactions on Antennas and Propagation, vol.71, no.9, pp.7690-7693, 2023 (SCI-Expanded)
- IX. **Elaboration and characterization of quaternary material Cu<sub>2</sub>ZnSnS<sub>4</sub> by spray pyrolysis technique using Taguchi method**  
Salma S., Hartiti B., Ziti A., Nkuissi H. J. T., Benali H., Aykut Y., Fadili S., Thevenin P., Ertugrul M.  
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.129, no.9, 2023 (SCI-Expanded)
- X. **Enhancing radar absorption performance of Sr-hexaferrite by hybridization with coiled carbon nanotubes via chemical vapour deposition method**  
Zulkimi M. M. M., Azis R. S., Ismail I., Mokhtar N., Ertugrul M., Hamidon M. N., Hasan I. H., YEŞİLBAĞ Y. Ö., TUZLUCA YEŞİLBAĞ F. N., ÖZTÜRK G., et al.  
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- XI. **An efficient cost effective wide-angle metasurface-based linear and circular polarization converter for X-, Ku- and K-band applications**  
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- XII. **Excitation wavelength dependent triple-mode photoluminescence of copper-based halides for advanced anti-counterfeiting**  
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- XIII. **Reconfigurable multifunctional graphene-based antenna for cancer therapy with THz wave ablation**  
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- XIV. **Temporal Reflection Response of Plane Waves Within an *N*-Layer Structure Involving Bianisotropy**  
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IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, vol.71, no.7, pp.5946-5953, 2023 (SCI-Expanded)
- XV. **A Comparative Study of the Structural and Optical Properties of ZnS Films Deposited by Spray-Pyrolysis Technique**  
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- XVI. **Parameter extraction method for reflection-asymmetric bianisotropic metamaterial slabs using one-port measurements**  
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- XVII. **Structural, mechanical and cytotoxic properties of Ta-doped diamond-like carbon films deposited via radio frequency magnetron sputtering on polyether ether ketone**  
Keles S., YEŞİL Z., SADELER R., Ertugrul M., Meletlioglu E.  
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- XVIII. **Investigation of the growth temperature effect on H<sub>2</sub> gas detection for ZnO thin films**  
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- XIX. **Mechanical Properties of Polymer-Infiltrated Fluorapatite Glass Ceramics Fabricated from Clam Shell and Soda Lime Silicate Glass**

KUL E., Matori K. A., Karadeniz S., Arslan E., Ertugrul M.

MATERIALE PLASTICE, vol.60, no.1, pp.128-136, 2023 (SCI-Expanded)

- XX. **Experimental and theoretical insights on the structural and optical properties of GeO<sub>x</sub> thin films deposited via RF magnetron sputtering under varying oxygen percentage**  
ŞENADIM TÜZEMEN E., Hopoglu H., SARITAŞ S., AYDINOĞLU H. S., ERTUĞRUL M., Maslov M. M., KAYA S., UNGAN F., GÜR E.  
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- XXI. **Honey-Water Content Analysis by Mixing Models Using a Self-Calibrating Microwave Method**  
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- XXII. **Artificial Neural Network Model for Evaluating Parameters of Reflection-Asymmetric Samples From Reference-Plane-Invariant Measurements**  
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- XXIV. **Synthesis and characterization of graphene/carbon nanotube hybrid: effects of Ni catalyst thickness and H<sub>2</sub> flow rate on growth and morphological structure**  
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- XXV. **Parameter Retrieval of Samples on a Substrate From Reflection-Only Waveguide Measurements**  
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- XXVI. **Determination of Constitutive Parameters of Strong-Coupled Bianisotropic Metamaterials Using Oblique Incidence Scattering Parameters**  
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- XXVIII. **A Study on Microwave Absorption Properties of Carbon Black and Ni<sub>0.6</sub>Zn<sub>0.4</sub>Fe<sub>2</sub>O<sub>4</sub> Nanocomposites by Tuning the Matching-Absorbing Layer Structures**  
Ibrahim I. R., Matori K. A., Ismail I., Awang Z., Rusly S. N. A., Nazlan R., Idris F. M., Zulkimi M. M. M., Abdullah N. H., Mustafa M. S., et al.  
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- XXIX. **Propagation constant measurements of reflection-asymmetric and nonreciprocal microwave networks from S-parameters without using a reflective standard**  
Hasar U. C., Kaya Y., ÖZTÜRK G., ERTUĞRUL M.  
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- XXX. **Single-step, large-area, variable thickness sputtered WS<sub>2</sub> film-based field effect transistors**  
ACAR M., Mobbakeri S., EFEOĞLU H., ERTUĞRUL M., GÜR E.  
CERAMICS INTERNATIONAL, vol.46, no.17, pp.26854-26860, 2020 (SCI-Expanded)
- XXXI. **A comprehensive study of molybdenum boats behavior during service life for continuous thermal evaporation technique, used in thin film technology**  
Rouhi S., Martinez-Medina J. E., Ozdemir M., ERTUĞRUL M., Aygun G., Ozyuzer L.  
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- XXXII. **Comparative study of single- and double-layer BaFe<sub>12</sub>O<sub>19</sub>-Graphite**

## **nanocomposites for electromagnetic wave absorber applications**

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- XXXIII. **Influence of  $B_2O_3$  Addition on the Properties of  $TiO_2$  Thick Film at Various Annealing Temperatures for Hydrogen Sensing**  
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- XXXIV. **Effect of nanometric and micronic particles size on physical and electrical properties of graphite thick film**  
Shafiee F. N., Hamidon M. N., Wahid M. H., Shaari A. H., ERTUĞRUL M., Abdullah N. H., Kusaimi M. A. M., Mustaffa M. S., Hasan I. H., Ibrahim I. R.  
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- XXXV. **Method for Electromagnetic Property Extraction of Sublayers in Metal-Backed Inhomogeneous Metamaterials**  
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- XXXVI. **Magnetic phase transition of mechanically alloyed single sample  $Co_{0.5}Ni_{0.5}Fe_2O_4$**   
Low Z. H., Ismail I., Shafie M. S. E., Ibrahim I. R., ERTUĞRUL M., Azis R. S., Saiden N. M., Hasan I. H., Idris F. M., Nazlan R.  
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- XXXVII. **Synthesis of ultra-long boron nanowires as supercapacitor electrode material**  
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- XXXVIII. **Feasibility and performance investigation of a new smart system integrating planar/tubular thermoelectric generators with solar flat plate collector**  
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- XXXIX. **Response of  $TiO_2/MWCNT/B_2O_3$  gas sensor to hydrogen using different organic binder**  
Chachuli S. A. M., Hamidon M. N., Mamat M. S., ERTUĞRUL M., Abdullah N. H.  
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- XL. **The use of  $MnOOH$  nanosheets as battery-type electrode for supercapacitor applications**  
YEŞİLBAĞ Y. Ö., TUZLUCA YEŞİLBAĞ F. N., ERTUĞRUL M.  
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- XLI. **Structural, Optical and Electrochromic Properties of  $WO_3$  Thin Films Prepared by Chemical Spray Pyrolysis Versus Spin Coating Technique**  
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- XLII. **A Hydrogen Gas Sensor Based on  $TiO_2$  Nanoparticles on Alumina Substrate**  
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- XLIII. **Silicon-doping influence on the crystalline, surface and optical features of cadmium oxide films deposited by sol-gel spin route**  
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- XLIV. **Synthesis of  $In_2O_3$  nanostructures with different morphologies as potential supercapacitor electrode materials**  
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- XLV. **Investigation of temperature, catalyst thickness and substrate effects in In<sub>2</sub>O<sub>3</sub> nanostructures**  
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- XLVI. **A device for X-Ray elemental mapping using annular radioisotope source**  
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- XLVII. **Effects of graphite on the synthesis of 1-D single crystal In<sub>2</sub>O<sub>3</sub> nanostructures at high temperature**  
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- XLVIII. **Effective Constitutive Parameters Retrieval Method for Bianisotropic Metamaterials Using Waveguide Measurements**  
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- L. **Boundary Effects on the Determination of Electromagnetic Properties of Bianisotropic Metamaterials From Scattering Parameters**  
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- LIII. **Determination of Reference-Plane Invariant, Thickness-Independent, and Broadband Constitutive Parameters of Thin Materials**  
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- LIV. **Characterization of Porous Silicon Fabry-Perot Optical Sensors for Reflectivity and Transmittivity Measurements**  
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- LV. **Reference-Plane-Invariant Effective Thickness and Electromagnetic Property Determination of Isotropic Metamaterials Involving Boundary Effects**  
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- LVIII. **The effects of heat treatment on the synthesis of nickel ferrite**

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- LX. **Reference-plane-invariant and thickness- and branch-index-independent retrieval of effective parameters of bi-anisotropic metamaterials**  
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- LXVII. **The domestic livestock resources of Turkey: inventory of pigeon groups and breeds with notes on breeder organizations**  
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- LXX. **Effect of Nb doping on structural, electrical and optical properties of spray deposited SnO<sub>2</sub> thin films**

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**II. Investigation and Production of Hybrid Wires Combining Superconductive MgB<sub>2</sub> and Ultra-conductive Graphene/Cu sheath**

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**VIII. Fabrication of Superconducting YBCO Microwave Microstrip Resonators**

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Publication: 110

Citation (WoS): 1330

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### **Non Academic Experience**

TÜBİTAK

Üniversiteler Arası Kurul

Oak Ridge National Labotatory (USA)

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Atatürk Üniversitesi

Atatürk Üniversitesi