
Ahmed Samir Mahmoud Ahmed Soliman

Associate Professor of Engineering Physics

Date of Birth: **1 February 1983**

Nationality: **Egyptian**

Marital Status: **Married**

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Education

- ✓ **Ph.D. in Engineering Physics, 2014**
 - Engineering Mathematics and Physics Department, Faculty of Engineering Shoubra, Benha University.
Topic: "Preparation and Study of the Physical Properties of a Glassy System"
Supervisors: Prof. Dr. Mohamed M. El-Okr, Prof. Dr. Fatma M. Metawe, Ass.Prof. Dr. Mohamed A. El-Sherbiny, Dr. Hytham A. Abdel-Ghany.
- ✓ **M.Sc. in Engineering Physics, 2011**
 - Engineering Mathematics and Physics Department, Faculty of Engineering Shoubra, Benha University, Egypt.
Topic: "Physical Behavior of Glasses Doped with Rare Earth Element"
 - **Supervisors:** Prof. Dr. Mohamed M. El-Okr, Prof. Dr. Fatma M. Metawe, Dr. Mohamed Farouk.
- ✓ **B.Sc. in Electrical Power and Electrical Machines, 2005**
 - Electrical Engineering Department, Faculty of Engineering at Shoubra, Benha University, Egypt (Very good with honor degree)

Employment

- **2021- Present:** Associate Professor, Basic science Department, Faculty of Engineering at Shoubra, Benha University, Egypt.
- **2014 – 2021:** Lecturer, Engineering Mathematics and Physics Department, Faculty of Engineering at Shoubra, Benha University, Egypt.
- **2011 – 2014:** Assistant Lecturer, Engineering Mathematics and Physics Department, Faculty of Engineering at Shoubra, Benha University, Egypt.
- **2006 – 2011:** Demonstrator for engineering physics, Engineering Mathematics and Physics Department, Faculty of Engineering at Shoubra, Benha University, Egypt.

Supervisions On Scientific Theses

- ✓ Supervised the doctoral dissertation of: Asmaa Ibrahim Ismail Al-Hila, entitled " Effect of Radiation on Physical Properties of Transition Metal Doped Glass" Physics Department - Faculty of Science - Al-Azhar University (Girls Branch), Cairo (registration March 2015 - awarded).
- ✓ Supervised the master's thesis of: Ahmed Mohamed Sayed Ahmed, entitled "Preparation and Characterization of a Glass System used as band pass filter" Physics Department - Faculty of Science - Al-Azhar University, Cairo (registration October 2015 - awarded).
- ✓ Supervised the master's thesis of: Ahmed Ibrahim Mohamed Mohamed, entitled "Preparation and Characterization of a Zinc-Sodium-Borosilicate Glass System Doped with a Heavy Element," Physics Department - Faculty of Science - Al-Azhar University, Cairo (registration March 2018 - awarded).
- ✓ Supervised the master's thesis of: Essam Atef Diab, entitled " Physical Properties of Iron Doped Borate Glass system" Physics Department - Faculty of Science - Al-Azhar University, Cairo (registration March 2018 - awarded).

Teaching Courses

- ✓ Participation in teaching and examination activities for theoretical and practical for physics courses for preparatory year and first-year students (Civil, Electrical Power, Mechanical Power) at the college.
 - Engineering Physics.
 - Properties of matter.
 - Electrostatics and Electrodynamics.
 - Optics and laser.
 - Electromagnetism.
 - Thermodynamics and Heat Transfer.
 - Fundamentals of Solids & Crystal Structure
- ✓ Participation in teaching and examination activities for theoretical and practical for physics courses for students in the Industrial Engineering program, Energy and Sustainable Energy Engineering program, and Construction and Site Management program.
- ✓ Participation in teaching and examination activities for postgraduate students.

Academic Activities

- ✓ Associate Member and Deputy Director of the Research and Development Projects Management Unit at the Faculty of Engineering at Shubra Benha university.
- ✓ Secretary of the Department Council for the academic years 2022-2023, 2023-2024, and 2024-2025.
- ✓ Member of the Faculty Library Committee for the academic years 2022-2023, 2023-2024, and 2024-2025.
- ✓ Nominated to represent the faculty in the University Library Council for the academic year 2024-2025.
- ✓ Member of the Training and Employment Committee for the academic years 2023-2024 and 2024-2025.
- ✓ Member of the Faculty's International Program Accreditation Committee.
- ✓ Member of the Faculty's Student Activities Committee.
- ✓ Attended the 2nd International Conference on Materials Science and Engineering and its

Applications in Various Fields, organized by the Laser Physics and Nanotechnology Unit at the Faculty of Engineering, Shubra, Benha University, from December 5-6, 2020.

- ✓ Attended the 3rd International Conference on Graduate Studies in Applied Sciences at Benha University, from May 22-23, 2024.
- ✓ Attended a workshop on innovative student projects held at Benha University on September 9, 2024.
- ✓ Attended Workshop No. 17 on Materials Science and Engineering on March 15, 2023.
- ✓ Attended Workshop No. 18 on Materials Science and Engineering on February 18, 2024.
- ✓ Attended the one-day seminar of the Egyptian Society for Materials Science, held on March 6, 2023.
- ✓ Reviewer for international scientific journals published by Elsevier.
- ✓ Participated in the 5th, 6th, 7th, 8th, and 10th Scientific Excellence Days for International Publications at Benha University.

Publications

1-M. Farouk, **A. Samir**, F. Metawe, M. Elokr, Optical absorption and structural studies of bismuth borate glasses containing Er^{3+} ions. *Journal of Non-Crystalline Solids* 371, 14-21 (2013).

2-M. El- Sherbiny, A. Samir, H. A. Abd El-Ghany, F. Metawe, M.M. El-Okr, Optical and physical studies of Bi doped borate glassy system. *Egyptian Journal of Solids*, 36, 51-62 (2013).

3- Ahmed Abokhadra, **A. Samir**, M. A. Hassan, L. I. Soliman, M. M. Elokr, Effect of alkali type on the optical behavior of Cu doped borate glass bandpass filter. *Egyptian Journal of Solids*, 40, 11–19 (2017).

4- M. Farouk, **A. Samir**, M. El Okr, Effect of alkaline earth modifier on the optical and structural properties of Cu^{2+} doped phosphate glasses as a bandpass filter. *Physica B: Physics of Condensed Matter* 530, 43 – 48 (2018).

5- **A. Samir**, Moukhtar A. Hassan, A. Abokhadra, L. I. Soliman, M. Elokr, Characterization of borate glasses doped with copper oxide for optical application. *Optical and Quantum Electronics* 51,123–136 (2019).

6- M. Farouk, F. Ahmad, **A. Samir**, Ligand field and spectroscopic investigations of cobalt doped erbium–zinc borate glasses. *Optical and Quantum Electronics* 51,292 – 304 (2019).

7- M. Farouk, **A. Samir**, A. Ibrahim, M. A. Farag, A. Solieman, Raman, FTIR studies and optical absorption of zinc borate glasses containing WO_3 . *Applied Physics A* 126:696 (2020).

8- **A. Samir**, Influence of Na_2O Addition on the Alkali Borochromate Glasses: Structure and Ligand Field. *Indian Journal of Physics* (2020).

9- Essam A. Elkelany, Moukhtar A. Hassan, **A. Samir**, A.M. Abdel-Ghany, H.H. El-Bahnasawy, M. Farouk, Optical and Mössbauer spectroscopy of lithium tetraborate glass doped with iron oxide. *Optical Materials* 112 (2021) 110744

- 10-** A. I. Ismail, **A. Samir**, F. Ahmad, L. I. Soliman, A. Abdelghani, the effect of radiation on the structure and ligand field of borate glasses containing Cr ions. *Optical and Quantum Electronics* (2021) 53:168
- 11-** A. I. Ismail, **A. Samir**, F. Ahmad, L. I. Soliman, A. Abdelghani, Spectroscopic Studies and The Effect of Radiation of Alkali Borate Glasses Containing Chromium Ions. *Journal of Non-Crystalline Solids* 565 (2021) 120743.
- 12-** M. Farouk, H.M. Mokhtar, Z.M. Abd El-Fattah, **A. Samir**, Vanadyl doped Li-zinc borate glasses: Optical and ESR study, *Journal of Non-Crystalline Solids* 568 (2021) 120964.
- 13-** **A. Samir**, Moukhtar A. Hassan, F. Ahmad c, M.S. Sadeq, S.Y. Marzouk f, H. Y.Morshidy, Impacts of BaO additives on the mechanical, optical and radiation shielding properties of BaO–K₂O– CoO– Al₂O₃–B₂O₃ glasses, *Optical Materials* 143 (2023) 114195.
- 14-** H.Y. Morshidy, Essam A. Elkelany , Kareem T. Abul-Nasr, **A. Samir**, H.H. El-Bahnasawy, Moukhtar A. Hassan, ⁵⁷Fe Mössbauer, optical and structural properties with ligand field effects of borosilicate glass doped with iron oxide, *Materials Today Communications* 37 (2023) 106917.
- 15-** M. Attallah, M. Farouk, **A. Samir**, Optimize the structural, optical, and thermal properties of Nd³⁺ ions doped boro-aluminum- tungsten glass, *Ceramics International* 50 (2024) 9528–9534
- 16-** H.M. Elsaghier, Ahmed R. Wassel, Moukhtar A. Hassan, S.Y. Marzouk, **A. Samir**, Impact of ZnO on spectroscopic and luminescence characteristics of Sm₂O₃–SrO–B₂O₃ glasses for warm reddish orange light emitting applications, *Materials Research Bulletin* 173 (2024) 112700.
- 17-** Hesham Y. Amin, **A. Samir**, Moukhtar A. Hassan, F. Ahmad, Aly Saeed, M. S. Sadeq, Environmental influences of BaO on structure and ligand field parameters of Co²⁺ inside K₂O–Al₂O₃–CoO–BaO–B₂O₃ glass, *Optical Materials* 149 (2024) 115056.
- 18-** Kareem T. Abul-Nasr, **A. Samir**, Moukhtar A. Hassan, Hesham Y. Amin, Structural-optical spectroscopic investigation of new Ni²⁺ bearing fluoro-aluminoborate glasses, *Optical Materials* 149 (2024) 115078
- 19-** Essam A. Elkelany, Hesham Y. Amin, **A. Samir**, M.M. EL-Hady, H.H. El-Bahnasawy, Moukhtar A. Hassan, Mössbauer, optical and structural properties of Fe³⁺ ion in borate glass *Journal of Rare Earths* 43 (2025) 162-170.