Ramy El-Bashar **Curriculum Vitae**

Ramy El-Bashar, PhD

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ORCID ID: https://orcid.org/0000-0003-2893-2603

Scopus: https://www.scopus.com/authid/detail.uri?authorId=57223146937

Google Scholar: https://scholar.google.com/citations?hl=en&user=q-SPdHUAAAAJ&view_op=list_works&sortby=pubdate

EXPERTISE

Nanophotonics, Energy harvesting, especially photovoltaic solar cells, and Antennas.

UNIVERSITY EDUCATION

2022 **Doctoral degree in Engineering Applications of laser,** The National Institute of Laser Enhanced Sciences, Cairo University. Dissertation on "Nanostructure energy harvesting for green electric power generation", Thesis advisor: Prof. Yehia Badr

2016 **M.Sc. degree in Engineering Applications of laser,** The National Institute of Laser Enhanced Sciences, Cairo University. Dissertation on "Opto-electronic Current Transformer for Intelligent (HVAC) Networks", Thesis advisor: Prof. Yehia Badr

2011 **Diploma degree in Engineering Applications of laser,** The National Institute of Laser Enhanced Sciences, Cairo University.

2003 **Electrical Power and machine Engineering Dept., Faculty of Engineering, Benha university.**
Graduation Project: SCADA Based Stand-Alone PV System Controlled by PLC
Final Grade: Very Good with honor (The 3rd).
Project Grade: Excellent.

PROFESSIONAL EXPERIENCE

Feb. 2023 to date **Assis. Professor (Part-time),** Akhbar El-Youm Academy, 6 October City, Egypt

From 2022 to date **Lecturer,** Engineering Applications of Laser Department, The National Institute of Laser Enhanced Sciences, Cairo University.

Dec. 2018 to date **Supervisor,** The Fabrication Laboratory, Engineering Applications of Laser Department, The National Institute of Laser Enhanced Sciences, Cairo University.

Feb. 2017 – April 2019 **Coordinator,** Laser Safety Training Unit, Laser Technology Center "LTC", The National Institute of Laser Enhanced Sciences, Cairo University.

2011-2016 **Teaching Assistant**, The National Institute of Laser Enhanced Sciences, Cairo University.

2009-2011 **Installation Engineer,** Nuclear Power Plant Authority (NPPA), Ministry of Electricity and Energy, Egypt

2008-2009 **Electrical Design Engineer**, Baraka's office, Egypt

INSTITUTIONAL ACTIVITIES

Summer 2024	**Member**, the summer training in the EAL department for under-graduate students of the Biomedical Engineering program, Egypt-Japan University for Science and Technology.
2016 to 2019	**Auditor**, Laser Device Inspection in Medical Centers, Laser Technology Center, "LTC", The National Institute of Laser Enhanced Sciences, Cairo University.
Since 2023 to date	**Member,** Electronic control Unit, The National Institute of Laser Enhanced Sciences, Cairo University.
Since 2023 to date	**Coordinator,** Faculty members Standard**,** Quality Assurance Unit, The National Institute of Laser Enhanced Sciences, Cairo University.
2019	**Membership** in the organizing committee for the Institute's ICLA 10 Conference.
2018	**Membership** in the organizing committee for the Institute's ICLA 9 Conference.
2015	**Participating** in the preparation of course descriptions for EAL department courses in the 2016 internal postgraduate regulations.

Dr. Ramy Ramadan El-Bashar

Faculty Activity

PUBLICATIONS

Peer reviewed (ISI) Journals

2024

1. Salem, A. F., El-Bashar, R., El-Rabaie, S. M., Abdelhamid, H., Hameed, M. F. O., & Obayya, S. S. A. (2024). Nanoscale grating-based perovskite solar cell with improved efficiency. Physica Scripta, 99(11), 115504. Optics Express
2. El-Bashar, S. M., Abdelhamid, H., Hameed, M. F. O., & Obayya, S. S. A. (2024). Optical and Electrical Characteristics of Dome Tapered Silicon Nanowires for Efficient Photovoltaic Solar Energy Conversion
3. Zhang, Q., Zhao, M., Li, Y., Bian, A., El-Bashar, R., Abdelhamid, H., ... & Dai, J. (2024). Polarization dependent exciton-plasmon coupling in PEA2PbI4/Al and its application to perovskite solar cell. Optics Express, 32(14), 25327-25342.

2023

4. Duan, C., Zhang, X., Du, Z., Chen, J., El-Bashar, R., Obayya, S. S. A., ... & Dai, J. (2023). Perovskite interface defect passivation with poly (ethylene oxide) for improving power conversion efficiency of the inverted solar cells. Optics Express, 31(12), 20364-20376.
5. Duan, C., Zhao, M., El-Bashar, R., Obayya, S. S. A., Hameed, M., & Dai, J. (2023). Bottom interface passivation with benzylamine thiocyanate for improving the performance of inverted perovskite solar cells. Solid-State Electronics, 210, 108799.

2022

6. El-Broullesy, S. M., El-Bashar, R., Ramadan, M. R. I., Aboul-Enein, S., Ibrahim, A., Wood, D. H., ... & Obayya, S. S. A. (2022). Broadband absorption of modified conical nanowires for photovoltaic applications. Optik, 271, 170245.
7. El-Bashar, R., Hussein, M., Hegazy, S. F., Badr, Y., Rahman, B. M. A., Grattan, K. T., ... & Obayya, S. S. (2022). Electrical performance of efficient quad-crescent-shaped Si nanowire solar cell. Scientific Reports, 12(1), 48.

2021

8. El-Bashar, R., Hussein, M., Hegazy, S. F., Badr, Y., Farhat. O. Hameed, M., & Obayya, S. S. A. (2021). Analysis of highly efficient quad-crescent-shaped Si nanowires solar cell. Optics Express, 29(9), 13641-13656.

2016

9. El-Bashar R., El-Azab J., Badr Y., Yousif R., “Research of an Optoelectronic Current Transformer Based on a Designed Magneto-Optic Sensor, Sensors & Transducers”, Vol. 196, Issue 1, January 2016, pp. 82-86.

Conference proceedings (SCOPUS-Indexed)

2023

1. El-Bashar, R., Hameed, M. F. O., Abdelhamid, H., Dai, J., & Obayya, S. S. (2023, December). Numerical Investigation of Si Nanowires Integrated Perovskite for Efficient Tandem Solar Cell. In 2023 24th International Arab Conference on Information Technology (ACIT) (pp. 1-4). IEEE.

2022

2. El-Bashar, R., Hameed, M. F. O., & Obayya, S. S. A. (2022, September). Highly Efficient Dome Shaped Nanowires Solar Cell. In 2022 International Conference on Numerical Simulation of Optoelectronic Devices (NUSOD) (pp. 217-218). IEEE.

2021

3. El-Bashar, R., Hussein, M., Hegazy, S. F., Badr, Y., Hameed, M. F. O., & Obayya, S. S. A. (2021, August). Efficient Silicon Nanowires Solar Cell. In 2021 International Applied Computational Electromagnetics Society Symposium (ACES) (pp. 1-2). IEEE.

PROJECTS

1- **Project Title:** Efficient Nanostructured Perovskite Solar Cells. AU Funded Research Grants Application Form, Date: Sep. 2023 to Aug. 2024

2- **Project Title:** Nanowire solar cell, Sa-Egypt joint Project in Applied Research and Innovation Projects in Disruptive Technologies Funded by: the Academy of Scientific Research and Technology (ASRT), Date: Sep. 2021 to Aug. 2023

3- **Project Title:** Nanowire solar cell, Sa-Egypt joint Project in Applied Research and Innovation Projects in Disruptive Technologies Funded by: the Academy of Scientific Research and Technology (ASRT), Date: Sep. 2021 to Aug. 2023

4- **Project Title:** Highly efficient nano-structure solar cells for energy security, Funded by: Institutional Links Grants, Egypt-UK Cooperation: Newton Mosharafa Program, Project ID: 30732, Date: Nov. 2019 to Sep 2022

EDITORIAL/REVIEWER BOARD

Reviewer, Optical and Quantum Electronics, Springer Nature.
Reviewer, Solid State Electronics, Elsevier.

PARTICIPATIONS

2022

1- **Oral Presentation:** Highly Efficient Dome Shaped Nanowires Solar Cell, The 22nd International conference Numerical Simulation of Optoelectronic Devices (NUSOD 22), Online-hosted at Politecnico di Torino,

2- **Oral Presentation:** Silicon Nanowires Solar Cells for Higher Conversion Efficiency, The 22nd International conference African network for solar energy (Ansole 22), Online-organized by the Riga Photonics Centre, Latvia, and was co-hosted by Zewail City of Science and Technology, Gizeh, Cairo, Egypt and Université Mohammed 5 de Rabat, Morocco.

2019

3- **Poster title:** Highly efficient crescent-shaped Si Nanowires Solar Cells, The 10th International conference of laser application (ICLA 10), Cairo, Egypt

4- **Coordinator**, Computational Photonics Workshop" on the margin of the ICLA10 conference

2018

5. **Completed**, Winter College on Extreme Non-linear Optics, Atto-second Science and High-field Physics, The Abdus Salam International Center for Theoretical Physics, ICTP, Trieste, Italy.

2016

6. **Poster title:** Highly Efficient Dome Shaped Nanowires Solar Cell, the 6th International Conference on Modern Trends Physics MTPR-16, Organized by Faculty of science, Cairo University, Egypt
7. **Poster title:** Magneto-Optic Field Sensor for DC Motor Protection, The 9th International conference of laser application (ICLA 09), NILES institute, Cairo University, Egypt
8. **Oral title:** Opto-Electronic Current Sensor using a Modified Toroid Iron Core**,** The 9th International conference of laser application (ICLA 09), NILES institute, Cairo University, Egypt
9. **Poster title:** A Highly Sensitive Optical Current Transformer For High Voltage, The Ions Naples 2016 Conference, Organized by physics and optics Naples Young student (PONYS), Italy

2015

10. **Participation,** Workshop of the **"**Academic and rhetorical technique" and "Creativity and Innovation Technique" of the further domain "academic skills", Falling Walls LAB 2015 Cairo, organized be German science enter Cairo [DWZ]"
11. **Attended**, Strategic Planning Workshop**,** NILES institute, Cairo University, Egypt

2013

12. **Completed**, Course report and study program workshop
13. **Completed**, Attended, program Description and study program workshop
14. **Completed**, Community participation workshop

2010

15. **Participation,** Nuclear Power Plant Simulator **(the 3rd),** Organized by the Nuclear power plant authority (NPPA), Egypt
16. **Completed**, Workshops titles: "Project Controls& Contracts Management" and " HSE Management & Quality training", Worly Parsons Company: Resources and Energy, Organized by the Cooperation of the NPPA and Worly Parsons, NPPA, Egypt
17. **Completed,** Preparation of the BID invitation for the first NPP Program, the central Institute For Continuing Education and training (ICE& T), Obninsk, Russia

2009

18. **Passed**, ICDL: International Computer Driving License, Egypt

FLDC: Faculty and Leadership Development Center Workshops, Cairo University, Egypt

For **Assoc. Prof. Degree**

Completed,
Workshop tiled: Interactive electronic courses, May 2024

For **Doctorate Degree**

Completed,
1- Anti-Corruption Methods, Feb. 2021
2- Exam and Student Evaluation Systems, Nov. 2019
3- Essentials of Integrated Education, Nov. 2020
4- Critical Thinking, July 2020
5- International Publishing of Scientific Research, July 2018
6- Digital Transformation (Fundamental of IT, Operating System, Fundamental of Database, Spread sheet, Presentation, Word, Introduction to Computer Network), Nov. 2021

For **Master Degree**

Completed,
1- E-learning, August 2015
2- International Publishing of Scientific Research, Feb. 2015
3- Conference Organization, Oct. 2014
4- Quality Standard in Teaching, June 2014
5- Research Ethics, March 2014
6- Competing for Research Funds, April 2013

NATIONAL & INTERNATIONAL MEMBERSHIPS

- Member in OPTICA (Formerly OSA, the optical society of America)..