

YASMIN MOHAMED YOUSEF BAKIER

NATIONALITY: EGYPTIAN.

PLACE OF BIRTH: LINZ, AUSTRIA

OCCUPATION: ASSISTANT PROFESSOR AT PHYSICS
DEPARTMENT, FACULTY OF SCIENCE, ASSIUT UNIVERSITY.

EDUCATION

Ph.D. Degree in Materials Science / Energy Materials **2018 - 2021**
Egypt-Japan University of Science and Technology (E-JUST), Alexandria, Egypt.

Thesis: "Physics of Carbon Quantum Dots for Novel Optical Sensing Applications"

Supervisors: Prof. Mohsen Ghalli, Prof. Waheed Zahra (E-JUST), Prof. Kazurani Matsuda (Kyoto University, Japan)

MSc Degree in Solid-State Physics and Materials Science **2013 - 2015**
Assiut University, Assiut, Egypt

Thesis: "Study of Some Physical Properties of Ge-Sb-Se Chalcogenide Glasses"

Supervisors: Prof. Mohamed Hafiz, Dr. Hisham Mahfouz, Dr. Nahed Abu-Elhasan

BSc Degree in Physics **2003 - 2007**
Assiut University, Assiut, Egypt

Thesis: "Photocatalysis and photocatalytic processes of TiO₂"

Supervisors: Prof. A. El-Amir

WORK EXPERIENCE

Researcher and Assistant Professor of Physics and Materials Science
Assiut University, Assiut, Egypt

10/2021 – current

- Teaching and researching in the fields of "Solid-State Physics", "Composite Materials", "Nanomaterials", "Optical Properties", "Photoluminescence Materials", "Synthesis of Photocatalysts' Nanomaterials"

- Administrative and Managerial activities in the department.

- Leading and carrying out a research project in "Carbon quantum dots as a catalyst for degradation of antibiotics"

Ph.D. Researcher at Energy Materials Department, Institute of Basic and Applied Sciences

Egypt-Japan University of Science and Technology (E-JUST), Alexandria, Egypt

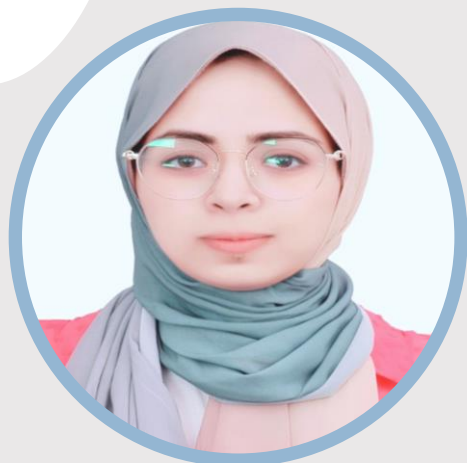
09/2018 – 09/2021

- Synthesis of carbon quantum dots

- accomplishing to characterize quantum dots for Novel Optical Sensing Applications using multiple techniques such as UV-Vis absorption spectroscopy, photoluminescence spectroscopy, FT-IR spectroscopy, XPS, XRD, HRTEM, zeta potential.

- First author of two publications in Q1 Journals and one publication in an international conference.

- Filed a patent at the Egyptian Patent Office with the title "Optical sensing of Hazardous Materials using Blue light Emissive Quantum Dots", Filing date: 13/02/2021, Registration number: 286/2020.



PROFILE

I am an experienced researcher with 13-year experience in solid-state physics, quantum dots, nanocomposites, photocatalysis, and photochemical degradation, with an excellent practice of experimental techniques and characterization methods, in addition to a good background of theoretical approaches, which gives me strong experience in treatment, analysis, and interpretation of research data.

With high analytical, critical, and communication skills, I managed to demonstrate research and teaching competence in materials science nanotechnology, and electrophotocatalysis.

PERSONAL DATA

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Egyptian

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LANGUAGE SKILLS

- ENGLISH: Fluent (IELTS score: 6.5)
- ARABIC: Native Speaker

OTHER SKILLS

- Communication skills
- Teamworking
- Problem-solving skills
- Technical Writing
- Quick and self-learner

SOFTWARE & OTHERS

- Windows
- Origin
- MS Office
- Google Docs, Sheets, Slides
- Zoom, MS Teams, Google Meet
- Adobe (Premiere Pro, Acrobat DC)

HOBBIES & INTERESTS

- Walking & nature
- Cooking
- Yoga and fitness
- Reading literature
- Puzzle solving

Researcher and Assistant Lecturer at physics department, faculty of science, Assiut University, Assiut, Egypt.

09/2008–08/2018

- Teaching and coaching students in several experimental physics labs such as modern physics, optics, materials matter, thermodynamics & heat transfer, electronics, solid-state physics, nuclear physics.
- Preparation of chalcogenide glasses using melt quenching technique and making thin films using a thermal evaporation process.
- Accomplishing three journal publications and two conference papers.
- Assisting in administrative and managerial tasks in my university

PUBLICATIONS

- Patent titled: "Optical sensing of Hazardous Materials using Blue light Emissive Quantum Dots" Filing date: 13/02/2021 Registration number: 286/2020
- **Bakier, Y. M.**, M. Ghali, A. Elkun, A. M. Beltagi, and W. K. Zahra. "Static interaction between colloidal carbon nano-dots and aniline: A novel platform for ultrasensitive detection of aniline in aqueous media." *Materials Research Bulletin* 134 (2021): 111119.
- **Bakier, Y. M.**, M. Ghali, and W. K. Zahra. "Highly sensitive fluorescent detection of pyridine using small size carbon quantum dots derived from folic acid." *Journal of Physics D: Applied Physics* 53, no. 40 (2020): 405103.
- **Bakier, Y. M.**, Mohsen Ghali, Mohamed Sami, and Waheed K. Zahra. "Highly luminescent un-doped carbon nano-dots driven from folic acid and passivated by polyethylene glycol." *Materials Today: Proceedings* 33 (2020): 1800-1803.
- Abd-Elrahman, M. I., **Y. M. Bakier**, A. A. Abu-Sehly, and M. M. Hafiz. "Glass transition and crystallization kinetics of new chalcogenide-alkali metal $\text{Se}_{80}\text{Te}_8(\text{NaCl})_{12}$ alloy." *Bulletin of Materials Science* 42, no. 2 (2019): 1-8.
- **Bakier, Y. M.**, M. I. Abd-Elrahman, A. A. Abu-Sehly, and M. M. Hafiz. "Optical properties of recent chalcogenide-alkali metal $\text{Se}_{80}\text{Te}_8(\text{NaCl})_{12}$ thin film." *Journal of Materials Science: Materials in Electronics* 29, no. 15 (2018): 13361-13367.
- Abd-Elrahman, M. I., A. A. Abu-Sehly, **Y. M. Bakier**, and M. M. Hafiz. "Thickness and optical constants calculation for chalcogenide-alkali metal $\text{Se}_{80}\text{Te}_8(\text{NaCl})_{12}$ thin film." *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 184 (2017): 243-248.
- M Hafiz, M., N. El-Kabany, H. Mahfouz Kotb, and **Y. M Bakier**. "Annealing Effects on Structural and Optical Properties of $\text{Ge}_{10}\text{Sb}_{30}\text{Se}_{60}$ Thin Film." *International Journal of Thin Film Science and Technology* 4, no. 3 (2015): 2.

POSTERS AT CONFERENCES

- Kinetic analysis of crystallization process of $\text{Ge}_{15}\text{Se}_{60}\text{Sb}_{25}$ glass using the iso-conversational method. Presented at ICMS conference 2015 at Zewail University.

REFERENCES

- **Prof. Dr. Abdelhameed Abu-Sehly**
Dean of Faculty of Science, Assiut University, Assiut, Egypt.
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- **Prof. Dr. Waheed Zahra**
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- **Dr. Nahed Abu-El-Hassan El-Kabany**
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