

Dr. Mohamed YAHYA, Research Fellow

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ResearcherID : [AAE-4851-2021](https://pubs.acs.org/doi/10.26434/chemrxiv-2021-aae)

Google Scholar : <https://scholar.google.com/citations?user=IHboVVcAAAAJ&hl=en>

RESEARCH AREAS

Organic Synthesis, Dyes, Pi-conjugated Structure, Push-pull Chromophores, Chemosensors, Heterocyclic Compounds, Organometallic Compound, Theoretical Chemistry.

EDUCATIONS

- March 2022** : **PhD in Organic Chemistry** at Gazi University-Ankara,Turkey.
July 2015 : **Bachelor of Education (B.Ed)** in Qualification for Physics and Chemistry Teaching at Ecole Normale Supérieure (ENS) , Martil, Morocco.
July 2014 : **Master of Science (M.Sc) in Chemistry** at UAE . FSc Tetouan, Morocco.
July 2012 : **Bachelor of Science (B.Sc) in Chemistry** at UAE . FSc Tetouan, Morocco

POSTDOCTORAL EXPERIENCE.

- July 2022 – Present** **University of Nevada Reno, NV United States.**
Role : Postdoctoral researcher in Organic Chemistry
Design, Bottom-up synthesis, and characterization of highly conjugated nanographene structures with open-shell character and/or stable redox states.

RESEARCH EXPERIENCE

- Sept 2016- Jan 2022** **Gazi University Ankara Turkey**
Role : Ph.D. Researcher in Organic Chemistry
Design, synthesis, of new push-pull dyes via different techniques such as microwave and conventional. Investigation of photophysical and thermal properties for second-order nonlinear optical and chemosensor applications.
- Mar - Apr 2015** **Internship** as a Teacher at MOHAMED-VI Public High School, Martil, Morocco.
- Mar - Jun 2014** **Internship**, at Abdelmalek Essaâdi University, Tetouan- Morocco. in Chimie Organique Appliquée Laboratory and Matériaux et systems interfaciaux laboratory
- Jan - Mar 2012** **Internship**, Medical Analysis Laboratory Fasi Fehri -Tetouan, Morocco.
- Nov - Dec 2011** **Internship**, Coopérative Laitière du Nord (Northern Dairy Cooperative), COLAINORD, Tetouan, Morocco.

TEACHING AND MENTORING EXPERIENCE

- ❖ **Teaching Assistant** at Department of Chemistry , UAE-FSc Tetouan, Morocco (2021-2022)
Assisted the instructor with the course material for the following courses .
 - Organic Chemistry S6-Lab I
 - Organic Chemistry S4-Lab II
- ❖ During my Ph.D. studies at Department of Chemistry , Gazi University, Ankara Turely I have co-mentored 3 M.Sc. students and 1 B.Sc. summer project student.

LIST OF PUBLICATIONS

12. **M Yahya** , R Metin, N Seferoğlu, E Şahin, A Barsella , Z Seferoğlu“ Evaluation Of Colorimetric Anion Sensing Ability In Organo-Aqueous Medium Of a Novel Organic Receptor Based Salicylidene Moiety “ Tetrahedron (under review).
10. **M Yahya**, R Metin, B Aydın, N Seferoğlu, Z Seferoğlu, “ pH Sensitive Colorimetric Coumarin-Thiophene Based Thiazolylazo Dyes “ Photochemical & Photobiological Sciences (under review).
11. **M Yahya**, N Seferoğlu, G Kaplana, A Barsella Y Nural, Z Seferoğlu “Synthesis, Photophysical, Nonlinear Optical Properties, and Theoretical Studies of Azo Dye bearing Coumarin-thiophene “ Journal of Molecular Structure (accepted).
9. **M Yahya** , G Kurtay , A.Suvitha “ On the Viability of Divergent Donor Moieties in Malononitrile-Based Donor- π -Acceptor NLO active materials: A DFT/TD-DFT Study“ Journal of Physical Organic Chemistry . 22 June 2022
8. D Zinad, Gh Salman, A Mahal , M Pratama, **M Yahya**, A Alkhouri, R. Mohapatra “ Design, Synthesis and Molecular Docking Study of Some Quinoline Derivatives “ medicinal chemistry research (Preprint).
7. **M Yahya** , Y Nural , Z Seferoğlu “ Recent Advances in the Nonlinear Optical (NLO) Properties of Phthalocyanines : A Review “ Dyes and Pigments . Volume 198, February 2022, 109960
6. **M Yahya** “ Insights into Structural , Solvent Effect , Molecular Properties and NLO Behavior of Hemithioindigo-Photoisomerization : A DFT Study “ Journal of Molecular Liquids . Volume 342, 15 November 2021, 116944
5. **M Yahya**, D Çakmaz, S Achelle, E Legall, E Şahin, and Z Seferoğlu “Synthesis, Photophysical, Thermal Properties and X-Ray Studies of Novel Organic Dyes bearing inden-1-ylidene and Fluorene “ Journal of Photochemistry and Photobiology A : Chemistry . Volume 416, 1 July 2021, 113311
4. **M Yahya**, A Bouziani, C Ocak, Z Seferoğlu, M Sillanpää“ Organic/Metal-organic photosensitizers for dye-sensitized solar cells (DSSC) : Recent developments, new trends, and future perceptions “ Dyes and Pigments .Volume 192, August 2021 . 109227
3. **M Yahya**, N Seferoğlu, A Barsella, S Achelle, Z Seferoğlu “Amino-substituted-1,1-dicyano-2,4-diaryl-1,3-butadiene chromophores: Synthesis and photophysical properties “

Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy. Volume 248, 5 March 2021 , 119178

2. E Keleş , **M Yahya** , E Aktan, B Aydiner , N Seferoğlu, A Barsella ,Z Seferoğlu ‘‘ Indole based push-pull dyes bearing azo and dimethine: Synthesis, spectroscopic, NLO, anion affinity properties and thermal characterization ‘‘ Journal of Photochemistry and Photobiology A: Chemistry . Volume 402, 1 November 2020.

1. I Yahaya, E Keleş, A U Putra, **M Yahya**, N Seferoğlu, Z Seferoğlu; ‘‘ Microwave-enhanced and conventional procedures for the synthesis of coumarin-thiophene amides, sulfonamide, and urea derivatives: Synthesis, photophysical activities, and multiple anions signalling via different mechanisms’’ Journal of Molecular Structure , Volume 1204, 15 March 2020.

PUBLICATIONS (in preparation)

1. **M Yahya**, A Bouziani, Z Seferoğlu. ‘‘ Chemosensors for cations detections: A review ‘‘ (Manuscript in preparation)

3. A. Bouziani, **M Yahya**, Z Seferoğlu, G. Celik. ‘‘ ZrO₂ for C-H activation towards alkane dehydrogenation: Is it fiction? ‘‘ (Manuscript in preparation)

4. **M Yahya**, A Bouziani, ‘‘ Synthesis, Optical Properties and Applications of Cyanine Dyes: A Review ‘‘ (Manuscript in preparation)

5. **M Yahya** , A.Suvitha ‘‘ Structural, Photophysical, Spectral and NLO Properties of Sequential Z/E-Photoisomerization of 6-Methyl-Hemithioindigo Switch ‘‘(Manuscript in preparation)

6. **M Yahya** ,A.Suvitha , A Bouziani ‘‘Structural, Photophysical and Optoelectronic Activity of Triphenylamine-Based Push-Pull Chromophores : A Theoretical Study’’ (Manuscript in preparation)

BOOK CHAPTER

1. **M. Yahya** , M. Yaman, Z. Seferoğlu "Optical Chemosensors: Principles, Chemistry, Strategies, and Applications," in Fluorescence Imaging - Recent Advances and Applications, ISBN 978-1-80355-184-5. London, United Kingdom: IntechOpen (accepted).

2. A. Bouziani and **M. Yahya**. "Mass Spectrometry Coupled with Chromatography toward Separation and Identification of Organic Mixtures," in Biodegradation Technology of Organic and Inorganic Pollutants. London, United Kingdom: IntechOpen.

PROJECTS

1. **TÜBİTAK**, Project grant No: 120Z850. "Synthesis, Photophysical, NLO, Thermal properties and Anion affinities of new donor- π -acceptor (D- π -A) compounds (Oct 2020-Oct 2021)"

2. TÜBİTAK, Project grant No: 117Z302. " Experimental and theoretical investigation of the photophysical, NLO (non-linear optic) and chemosensor properties of novel functional dyes (Nov 2018 - Nov 2019)

AWARDS & FUNDING

- **Post-Doctoral Fellowship** funded by the **US Department of Energy**. (University of Nevada Reno, NV 89557-0240) (July 2022 – July 2023)
- **Ph.D. Scholarship** provided by Presidency for Turks Abroad and Related Communities (YTB) **Republic of Turkey**. (September 2015-September 2021)
- **Ph.D. Scholarship** provided by **Ministry of National Education**, Vocational Training, Higher Education and Scientific Research **Kingdom of Morocco** (September 2017-september -2020)

EDITORIAL ACTIVITIES

- Reviewer in International Journal of Engineering, Research, and Technology
- Course certificate from ACS Reviewer Lab
- Course certificate on Academy Practical Peer Review from Publons

PROFESSIONAL MEMBERSHIPS

- **2021 - Present** Member, Chinese Chemical Society (CCS) .
- **2020 - Present** Member International Younger Chemists Network (IYCN)
- **2020 - Present** Member of the United Kingdom & Ireland Controlled Release Society (UKICRS)
- **2018 - 2020** Student Member , American Chemical Society (ACS)
- **2017 – 2019** Student Member , Royal Society of Chemistry

CONFERENCES AND WORKSHOPS

- Participation at 5th Pharmaceutical Chemistry : Congress on Drug Ingredient Design, Synthesis, Production and Standardization Antalya / Turkey 30 march -02April 2017
- Poster communication at the 8th National Electrochemistry Meeting (RNE 08) Ecole Nationale Supérieure des Mines, Rabat- Morocco, March 26-27 2015
- 1st Session of the Green Days at the Faculty of Sciences , Tetouan- Morocco , 14 March 2015.
- 16th Edition of Research Days at Abdelmalek Essaadi University, Tangier- Morocco, 19 -20 December 2014.
- Poster communication at the 1st Francophone Days at the Faculty of Sciences, Kenitra- Morocco, 21-22 Nov 2014.
- Training Seminar on job search techniques organized by the Foundation for Employment Education (EFE), Tetouan- Morocco, 10 Dec 2013.

SKILLS AND COMPETENCES

- Proficiency in MestReNova, OMNIC, LabPro plus, Origin, Chem Office, and Microsoft Office Products
- Design, synthesis, of organic chromophores containing a push-pull system (D- π -A). via different techniques such as microwave and conventional,
- Expertise in advanced characterization techniques including infrared spectroscopy (IR), nuclear magnetic resonance (NMR), UV- vis- Fluorescence Spectroscopy, X-ray diffraction (XRD), thermogravimetric analysis (TGA), mass spectrometry (MS), and column & gas & ionic& liquid chromatography
- Vast experience in theoretical calculation (Optim, FMO, NLO) using Gaussian software.
- Capable of complex problem-solving techniques; applying ingenuity creativity as well as a practical approach. Excellent individual and teamwork skills with an aptitude to work collaboratively on solving problems. Participates in several projects and can successfully perform multiple tasks at a time.

LINGUISTIC SKILLS

- Arabic (Mother tongue)
- Turkish (Proficient)
- English (Proficient)
- French (Proficient)

REFERENCES

Associate. Prof. Dr. Wesley A. Chalifoux (Post-doctoral research supervisor)
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NV .United States.
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Prof . Dr. Zeynel Seferođlu (Ph.D. supervisor)
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Prof. Dr. Bariř TEMELLİ (Head of Department)
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