

Fatema Yahya Mohamed Saeed

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EDUCATION

- 11/2015–02/2019 PhD in Physics
University of Trieste, Trieste (Italy)
Supervisor: prof. Maria Peressi
- 10/2013–10/2015 Laurea Magistrale in Fisica (Master degree)
University of Trieste, Trieste (Italy)
Supervisor: prof. Maria Peressi
Mark: 103/110
- 11/2006–07/2011 Bachelor degree in Physics
University of Khartoum, Khartoum (Sudan)
Supervisor: prof. Arbab. I. Arbab
Mark: 7.9/10

Positions held

- 01/2023–04/2025 Postdoctoral fellow
Laboratoire des Solides Irradiés, Ecole Polytechnique, Palaiseau (France)
- 08/2020–12/2022 Assistant professor
Department of physics, University of Khartoum, Khartoum (Sudan)
- 07/2019–06/2020 Postdoctoral fellow
Department of DEMOCRITOS, IOM-CNR, Trieste (Italy)
- 02/2019–06/2019 Research visitor
Department of physics, University of Trieste, Trieste (Italy)
- 07/2012–03/2021 Teaching assistant
Department of physics, University of Khartoum, Khartoum (Sudan)

AWARDS, GRANTS and FELLOWSHIPS

- 05/2025–05/2026 Pause program fellowship
To join Ecole Polytechnique in France as a postdoctoral fellow
- 01/2023–04/2025 EuroTechPostdoc2 Marie-Curie fellowship
To join Ecole Polytechnique in France and EPFL in Switzerland as a postdoctoral fellow
- 08/2022–08/2022 ASESANET-EU Award
To attend the Psi-k conference from 22 to 25 August 2022, Lausanne (Switzerland)
- 05/2022–07/2022 French Embassy grant
To visit the Theoretical spectroscopy group at the Ecole Polytechnique, Palaiseau (France)
- 08/2019–12/2020 ISCRA Type C grant (400.000 CPU hours at CINECA)
To perform DFT calculations of CO adsorption on small Pt clusters/TiO₂(210) surface
- 01/2019–06/2019 TRIL Fellowship
Awarded by ICTP for research at University of Trieste, Trieste (Italy)
- 11/2015–11/2018 ICTP Fellowship
Awarded by University of Trieste for my PhD, Trieste (Italy)

TEACHING EXPERIENCE

- Held the course "Solid State Physics (PHY471)" for the fourth year undergraduate students of physics

department (second semester, duration of 3 months, started August, 2021).

- Held the course "Laboratory Physics" for the second year undergraduate students of physics department (second semester, duration of 3 months, started August, 2021).

- Held the course "Atomic Physics (PHY341)" for the third year undergraduate students of physics department (first semester, duration of 3 months, started February, 2021).

- Held the course "Laboratory Physics (PHY301)" for the third year undergraduate students of physics department (first semester, duration of 3 months, started February, 2021).

SUPERVISING EXPERIENCE

Supervisor or co-supervisor of the undergraduate students for their Bachelor (Honor) degree:

- Almustafa Ahmed, University of Khartoum, Department of Physics, Search for Materials For Storing Methane as Fuel for Vehicles (08/2022).

- Duaa Salim, University of Khartoum, Department of Physics, (started September 2024).

- Gotiba hamza, University of Khartoum, Department of Physics, (started September 2024).

LANGUAGES

Arabic (mother tongue), English, French (basic)

INVITED TUTORS/TALKS AT SCHOOLS/CONFERENCES

03/2024 *The Central African Conference of Physics and Applications. Invited for Oral presentation.*

05/2022 *USAfri Workshop at the APS March Meeting. Invited for Oral presentation.*

06/2021 *African School on Electronic Structure Methods and Applications (ASESMA). Invited as a tutor.*

03/2021 *U.S.–Africa Initiative in Electronic Structure (USAfri). Workshop at the APS March Meeting. Invited for Oral presentation*

LIST of PUBLICATIONS

- N. Podda, M. Corva, **F. Mohamed**, Z. Feng, C. Dri, F. Dvorak, V. Matolín, G. Comelli, M. Peressi, E. Vesselli, *Experimental and Theoretical Investigation of the Restructuring Process Induced by CO at Near Ambient Pressure: Pt Nanoclusters on Graphene/Ir(111)*, *ACS Nano*, 11, 1041-1053 (2017). doi.org/10.1021/acsnano.6b07876
- Manuel Corva, **Fatema Mohamed**, Erika Tomsic, Zhijing Feng, Tomas Skala, Giovanni Comelli, Nicola Seriani, Maria Peressi, Erik Vesselli. *Substrate- to Laterally-Driven Self Assembly Steered by Cu Nanoclusters: the Case of FePcs on an Ultrathin Alumina Film: the case of FePcs on an ultrathin alumina film*, *ACS Nano* 2018, 11, 10755-10763. doi.org/10.1021/acsnano.8b05992
- M. Corva, **F. Mohamed**, E. Tomsic, M. Rinaldi, C. Cepek, N. Seriani, M. Peressi, E. Vesselli. *Learning from Nature: Charge Transfer and Carbon Dioxide Activation at Single, Biomimetic Fe Sites in Tetrapyrroles on Graphene*, *J. Phys. Chem. C*, 123, 3916-3922 (2019). doi.org/10.1021/acs.jpcc.8b11871
- Maximilian Kastenmeier, Lukáš Fusek, **Fatema Mohamed**, Christian Schuschke, Michal Ronovský, Tomáš Skála, Matteo Farnesi Camellone, Nataliya Tsud, Viktor Johánek, Stefano Fabris, Jörg Libuda, Simone Piccinin, Yaroslava Lykhach, Josef Mysliveček, Olaf Brummel, *Pd/Co3O4 (111) interface formation*, *J. Phys. Chem. C*, 127, (2023). doi.org/10.1021/acs.jpcc.3c00261.
- **Fatema Mohamed**, Manuel Corva and Erika Tomsic and Zhijing Feng and Tomáš Skála and Giovanni Comelli and Nicola Seriani and Erik Vesselli and Maria Peressi. *Excellent self-assembly properties of Iron Phthalocyanines on alumina for locally ordered single-atom catalysts*. *Physics Open*, 23, (2025). doi.org/10.1016/j.physo.2025.100259.