IL RETTORE

- Visto il Decreto Rettorale n. 3806 del 20/09/2022, con il quale è stato indetto il concorso, per titoli e colloquio, per il conferimento di n. 1 borsa di ricerca post-laurea di tipo consolidator della durata di 6 mesi, eventualmente rinnovabili, dell’importo di € 9.000,00 (necemila/00), per lo svolgimento di una ricerca sul tema: "Polymer and hybrid photonic structures for sensing and emission control" presso il DCCI dell’Università degli Studi di Genova;

- Visto il Decreto Rettorale n. 4851 del 09/11/2022 con il quale è stata costituita la Commissione giudicatrice per il conferimento della suddetta borsa di ricerca;

- Visto il verbale della Commissione giudicatrice del concorso in parola, riunitasi in data 15/11/2022;

- Constatata la regolarità della procedura seguita;

DECRETA

Art. 1

Sono approvati gli atti del concorso di cui in premessa e la seguente graduatoria di merito:

1. Dott.ssa Heba Abdelsalam Abdelwahab Abdelsalam Megahd punti 93/100

Sotto condizione dell'accertamento dei requisiti di cui al bando, è dichiarata vincitrice del concorso in parola la Dott.ssa Heba Abdelsalam Abdelwahab Abdelsalam Megahd.

Genova, 17.11.2022

IL RETTORE

Firmato digitalmente da:
FEDERICO DELFINO
Università degli Studi di Genova
Firmato il: 17-11-2022 12:30:11
Serie certificate: 818306
Valido dal 03-11-2020 al 03-11-2023

Responsabile del procedimento: Cristina Tubino
Area Internazionalizzazione, Ricerca e Terza Missione
Servizio Ricerca
Heba Megahd, MSc

Summary

- Interdisciplinary materials scientist with experience in polymer science and photonics
- Involved in research collaborations with groups in 4 countries, including self-initiated projects
- 9 peer-reviewed publications (3 as first author), h-index 4, 58 citations (source: Scopus)
- 10 conference and meeting contributions including 8 oral ones

Education

11/2019 – 10/2022  **University of Genoa, Italy**, PhD student in Chemical Sciences and Technologies
  Expected Thesis Submission 12/2022
  Full Scholarship for PhD studies, Supervisor: Prof. Davide Comoretto
  Thesis title: “New Polymer and Composite Structures for Photonic Applications”

2017 – 2019  **SER-P+ Erasmus Mundus Masters**, Full Scholarship
  M.Sc., Joint master’s degree from Université Paris-Saclay and University of Genoa in Surface, Electro, Radiation, and Photochemistry
  (specialization in Surface Science) (27.87/30)
  9/2017 – 1/2018  Université Paris-Saclay
  2/2018 – 8/2019  University of Genoa (Thesis 110/110)

10/2012 – 7/2017  **German University in Cairo (GUC)**, Egypt, Academic Excellence Scholarship
  B.Sc., Material Science and Engineering, top 10% of class (1.16/1, German Scale)

Relevant Research Experience

  (Visiting PhD student)
  - Developing of novel liquid crystal-based sensors (including synthesis, processing characterization)

2/2019–Current  **Responsive Polymer and Solution-Processed Nanophotonics group**, University of Genoa
  (as a master’s and PhD student)
  - Polymer thin-film fabrication through spin coating
  - Characterizing film morphology and optical properties through UV-Vis spectroscopy, Fluorescence spectroscopy and AFM
  - Engineering polymer photonic structures for optical microcavities
  - Fabricating polymer photonic crystal chemical sensors and characterizing them through spectroscopic measurements
  - Developing and building experimental optical setups
  - Performing data analysis and modelling through MATLAB® and Origin®
  - Helping maintain and organize lab, training, and supervising students

3/2016 – 8/2016  **Institute of Production Engineering of E-Mobility Components (PEM)**, RWTH Aachen University, Germany (Bachelor’s Thesis)
  - Designed (in SolidWorks®) and fabricated 3D printed ABS plastic samples
  - Conducted quasi-static, creep and fatigue tests and analyzed failure surfaces

  - Conducted literature review and prepared samples for mechanical testing

8/2014 – 9/2014  **Quality Assurance Intern**, Housing & Building National Research Centre, Egypt
  - Assisted with quality assurance of building materials
Teaching activity
2/2015 – 5/2015 *Teaching Assistant for Metallic Materials laboratory*, GUC, Egypt
- Explained concepts of structure and characterisation of metallic materials to 70 students
- Conducted demonstrations including metallography, x-ray crystallography and various mechanical testing procedures.

Trainings and Workshops
6/2021 *Leibniz Young Polymer Scientist Forum*, Online/Aachen
6/2021 *Nanolito Summer School on Nanolithography*, University of Salamanca
5/2021 *European Polymer Federation Summer School on Polymers and Circular Economy*, Online
8/2019 *International Summer School on Circular Economy*, HafenCity University Hamburg (Funded)
7/2018 *Summer School on Science Management for Scientists and Engineers*, University of Genova (Funded)

Reviewer Activities
3/2021—Current *Volunteer, Professional Reviewing Center*, Egypt Scholars Inc.
- Reviewer for university admission, scholarship, and job applications

Skills
*Fabrication and characterization* Spin coating, bar coating, 3D printing, DSC, TGA, Mechanical testing, Optical microscopy, AFM, UV-VIS spectroscopy, Fluorescence spectroscopy (steady state and time resolved)

*Software* Origin, MS Office, MATLAB, Gwyddion (data visualization and analysis), Blender (3D modelling software), Adobe Photoshop and Adobe Illustrator, ANSYS (finite element analysis software), SolidWorks (CAD software)

*Languages* Arabic (Mother-tongue), English (Fluent, IELTS 8.5), Italian (Intermediate, B2), German (basic), French (basic)

Writing Experience
8/2021—Current *Volunteer Student Contributor Writer*, Physics World
3/2020—Current *Volunteer Editor*, Maqal ‘Elmy Science popularization Initiative
- Translated and summarized impactful research papers to Arabic
- Proofread articles to finalize for online publication

Awards and Scholarships
11/2019—10/2022 PhD scholarship, University of Genoa
9/2017—08/2019 SERP+ Erasmus Mundus Master’s Scholarship
10/2012—7/2017 Academic Excellence Partial Scholarship, German University in Cairo
6/2020 Best Presentation, Macrogiovani - Digital Edition 2020
7/2019 Best Presentation, Macrogiovani 2019
Conference Presentations

• Megahd, H.; Lova, P.; Comoretto, D. (2022) “Polymer photonic crystal chemical sensors”, Convegno Nazionale Dell’Associazione Italiana di Scienza e Tecnologia Delle Macromolecole 2022, Trento, IT (Oral)
• Megahd, H.; Lova, P.; Comoretto D. (2021) “All-Polymer Microcavities for Photoluminescence Control”, Nanolito Summer School, Salamanca, ES (Poster)
• Megahd, H.; Lova, P.; Comoretto D. (2021) “Commodity Polymers as Sensors”, EPF Summer School (2021), Online (Poster)

List of Publications

• 9 publications included in Attachment B