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Jorge Ávila

Education

2016 – 2020 **Ph.D. in Nanoscience and Nanotechnology**, Universitat de Valencia, Spain.
Focused on the development of single junction and tandem perovskite solar cells by sublimation methods.

2014 – 2016 **M.Sc. in Nanoscience and Nanotechnology**, Universitat de Valencia, Spain.
Focused on *perovskite photovoltaic devices*.

2010 – 2014 **B.Sc. in Chemistry**, Universidad de Granada, Spain.
Awarded Best Academic Record Prize. Average grade: 9.2/10

2006 – 2010 **Member of ESTALMAT**, Universidad de Granada, Spain.
Selective project for the detection and stimulus of mathematical talent including weekly lectures on mathematical topics.

Courses

2020 **Machine Learning**, *Online Course*, Stanford University, Coursera.

2020 **Elements of AI**, *Online Course*, University of Helsinki.

2019 **Automate the Boring Stuff with Python Programming**, *Online Course*, Udemy.

2017 **Experimentation with electronic equipment for low level measurements**, ETSE, Universitat de Valencia.

Experience

2016 – 2020 **Teaching Assistant**, *Universitat de Valencia*, Valencia.
Inorganic chemistry lab courses in the chemistry and pharmacy degrees.

Jun – Sept 2019 **Visiting Student**, *King Abdullah University of Science and Technology*, KAUST, Saudí Arabia.
- Development of perovskite/silicon tandem devices.
- Ellipsometry measurements and data analysis.

Skills

Data Analysis Data processing, statistical analysis and competencies in data presentation and visualization.

Programming Python, octave (Matlab), C and SQL.

Algorithms proficiency Advance knowledge of data structures and algorithms. Participation in programming competitions since 2017 as "Advent of Code" and "Codeforces".

Material Science Preparation of thin layer and devices (Solar cell and LECs):
- Spin, blade and sublimation coating methods of perovskite and other semiconductor materials.
- Experience working in cleanroon and glovebox.
- UV-Vis spectroscopy, photoluminiscence, X-ray diffraction, ellipsometry, profilometry, optic microscopy and SEM measurements.
- Iluminated J-V, dark diode characteristics, Electroluminiscence and EQE measurements.

Languages

Spanish Native

English Professional working proficiency *Written and Spoken*

Publications and Conferences Attended

Contribution in more than 15 publications.

Featured Publications

- High voltage vacuum-deposited CH3NH3PbI3–CH3NH3PbI3 tandem solar cells - Energy & Environmental Science
- Vapor-Deposited Perovskites: The Route to High-Performance Solar Cell Production? - Joule

Conferences Attendance to 11 conferences with 6 oral presentations and 2 posters.

Honors & Awards

Grants

- FPU Scholarship which is a national competitive grant to fund the PhD studies.
- Collaboration Scholarship which is given to promising students to start research projects during bachelor.

2009 – 2010

- Winner of 'Science in Action' National competition in the Mathematics category
- Classified in the regional Mathematics Olympics