



## PERSONAL INFORMATION

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## EDUCATION

- 1999-2004: Bachelor degree in Physics, King Fahd University of Petroleum and Minerals (KFUPM)
- 2004-2007: MS degree in Physics, King Fahd University of Petroleum and Minerals (KFUPM). Thesis supervisor: Prof. Nour Tabet
- 2012-2017: PhD degree in Physics, Swiss Federal Institute of Technology in Lausanne (EPFL). Thesis supervisor: Prof. Benoit Deveaud.

## CURRENT RESEARCH INTERESTS

- Dye-sensitized and perovskite solar cells
- Chemical growth of metal oxide nanostructures
- Cathodoluminescence and electron microscopy analysis of nanostructures
- Scanning probe microscopy

## CAPABILITIES

- Languages: Arabic (mother language), English (Toefl score 613)
- Programming languages: Fortran, C++
- Excellent experience in Mathematica, and good experience with some other algebraic packages such as Maple, MathCad.

## SELECTED CONFERENCE COMMUNICATIONS

1. M. Hezam, N. Tabet and A. Mekki, "Synthesis and Characterization of DC Magnetron Sputtered ZnO Thin Films Under High Working Pressures", Presented at the International Conference on Materials for Advanced Technologies (ICMAT 2009), 28 June -3 July 2009, Singapore
2. M. Hezam, M. Alhoshan, M. Alsalmi, S. Alrokayyan, M. Kawwam, "Lithography-independent Fabrication of Long Nanogap Electrodes", Presented at the International Conference on Materials for Advanced Technologies (ICMAT 2011), 26 June -1 July 2011, Singapore.
3. M. Hezam, A. Eltoni, J. Labis, B. Alruhaimi, M. Alduraibi, A. Aldwayyan, "Growth of Raspberry-like and Sphere-like TiO<sub>2</sub> Nanostructures by Controlled Agglomeration of TiO<sub>2</sub> Nanocrystals", presented at the ImagineNano 2013 Conference (Trends in NanoApplications: Energy), April 23-26<sup>th</sup>, 2013, Bilbao, Spain.
4. M. Hezam, G. Jacopin, M. Shahmohammadi, Q. Peng, S. Qaid, I. Bedja, J-D Ganiere, A. Aldwayyan, M. K. Nazeeruddin, M. Gratzel, B. Deveaud, "Investigation of Charge Separation and Charge Injection Dynamics in Perovskite Solar Cells", presented as (oral) at the Hybrid and Organic Photovoltaics 2014 Conference (HOPV14), May 11-14<sup>th</sup>, 2014, Lausanne, Switzerland.

## SELECTED JOURNAL PUBLICATIONS

1. H. M. Ghathani, S. M. Qaid, M. Hezam, J. P. Labis, M. Alduraibi, I. M. Bedja, A. S. Aldwayyan, "Laser induced photocurrent and photovoltage transient measurements of dye-sensitized solar cells based on TiO<sub>2</sub> nanosheets and TiO<sub>2</sub> nanoparticles", *Electrochimica Acta* (2016), 212, 992-997.
2. M.I. Dar, G. Jacopin, M. Hezam, N. Arora, S. M. Zakeeruddin, B. Deveaud, M. K. Nazeeruddin, M. Gratzel, "Asymmetric cathodoluminescence emission in CH<sub>3</sub>NH<sub>3</sub>Pb<sub>1-x</sub>Br<sub>x</sub> Perovskite Single Crystals", *ACS Photonics* (2016), 3, 947-952.
3. N. Arora, M. I. Dar, M. Hezam, W. Tress, G. Jacopin, T. Moehl, P. Gao, A. S. Aldwayyan, B. Deveaud, M. Gratzel & M. K. Nazeeruddin, "Photovoltaic and Amplified Spontaneous Emission Studies of High-Quality Formamidinium Lead Bromide Perovskite Films", *Advanced Functional Materials* (2016), 26(17), 2846-2854.
4. J. P. Labis, M. Hezam, A. Al-Anazi, H. Al-Britthen, A. A. Ansari, A. M. El-Toni, R. Enriquez, G. Jacopin, M. Al-Hoshan, "Pulsed laser deposition growth of 3D ZnO nanowall network in nest-like structures by two-step approach", *Solar Energy Materials and Solar Cells* 143 (2015), pp. 539-545
5. M. Hezam, N. Tabet, A. Mekki, "Synthesis and Characterization of DC Magnetron Sputtered ZnO Thin Films Under High Working Pressures", *Thin Solid Films* 518 (2010) e161-e164.