

1. Name and contact information

Name: Essam Alruqobah
Rank: Assistant Professor
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2. Education

| Degree | Field | Institution | Year |
|---------------|----------------------|--------------------|-------------|
| PhD. | Chemical Engineering | Purdue University | 2020 |
| M.S. | Chemical Engineering | Purdue University | 2017 |
| B.S. | Chemical Engineering | Kuwait University | 2014 |

3. Academic Experience

| Institution | Designation | Year/period |
|--------------------|-----------------------------|--------------------|
| Kuwait University | Assistant Professor | 2021 - Present |
| Purdue University | Graduate Research Assistant | 2015 - 2020 |

4. Membership in professional organization

American Society of Chemical Engineers; Material Research Society; American Chemical Society; Kuwait Society of Engineers

5. Honors and awards

- Safety and Citizenship Award, Solar Energy Research Center, Davidson School of Chemical Engineering, Purdue University (2019)
- Kuwait University Fellowship for Overseas MS. and PhD. Education (Aug. 2015 - Dec. 2020)
- Graduated top of class, Kuwait University (Dec. 2014)
- Kuwait University Outstanding Student Award. Twice awarded (2013 & 2014)
- Dean's List, College of Engineering and Petroleum, Kuwait University. Multiple semesters.

6. Publications and Presentations

- McLeod, S.; Alruqobah, E.; Agrawal, R. Liquid Assisted Grain Growth in Solution Processed Cu(In, Ga)(S, Se)₂. Sol. Energy Mater. Sol. Cells 2019, 195, 12–23.
- Alruqobah, E. H.; Agrawal, R. Potassium Treatments for Solution-Processed Cu(In, Ga)(S, Se)₂ Solar Cells. Appl. Energy Mater. 2020, 3 (5), 4821–4830.
- Ellis, R. G.; Turnley, J. W.; Rokke, D. J.; Fields, J. P.; Alruqobah, E. H.; Deshmukh, S. D.; Kisslinger, K.; Agrawal, R. Hybrid Ligand Exchange of Cu(In,Ga)S₂ Nanoparticles for Carbon Impurity Removal in Solution-Processed Photovoltaics. Chem. Mater. 2020, 32 (12), 5091–5103.
- Ellis, R. G.; AlRuqobah, E. H.; Turnley, J. W.; Agrawal, R. Improving Solution Processed CIGSSe Devices Through Colloidal Nanoparticle Ligand Exchange. In 2020 47th IEEE Photovoltaic Specialists Conference (PVSC); IEEE, 2020; pp 1944–1946.
- Suresh, S.; Rokke, D. J.; Drew, A.A.; Alruqobah, E. H. Agrawal, R.; Uhl, A. R. Extrinsic Doping of Ink-based Cu(In, Ga)(S, Se)₂ Absorbers for Photovoltaics Applications. Adv. Energy Mater. 2022, 12, 2103961.
- Alruqobah, E.; Murray, A.; Handwerker, C. Agrawal, R. Surface RbF Treatments for Solution-Processed Cu(In, Ga)(S, Se)₂ Solar Cells. In preparation.
- Alruqobah, E.; Agrawal, R. Potassium Treatments for Cu(In, Ga)(S, Se)₂ Absorbers. Poster Presentation Presented at the Fall 2019 Materials Research Society Meeting, Boston, MA. December 1-6, 2019.