

Camila Saez Cabezas

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EDUCATION

University of Texas at Austin, Cockrell School of Engineering Austin, TX
Doctor of Philosophy, Chemical Engineering In Progress

University of Maryland, A. James Clark School of Engineering, College Park, MD
Bachelor of Science, Chemical and Biomolecular Engineering (Cum Laude) May 2014

RESEARCH EXPERIENCE

University of Texas at Austin Department of Chemical Engineering Austin, TX
Graduate Student Researcher (Advisor: Prof. Delia Milliron) 2014-Present

- Studying the assembly of nanocrystal gel networks via depletion-attraction interactions for application in electrochromic windows.

University of Maryland Department of Chemical Engineering College Park, MD
Undergraduate Student Researcher (Advisor: Prof. Srinivasa Raghavan) 2013-2014

- Studied the stimulus-induced and biomimetic self-assembly of polymer microspheres facilitated via surface functionalization.

Laboratory of Scientific Image Analysis (SCIAN) Santiago, Chile
Research Intern-Digital Pathology Center/Internet Assisted Digital Spermogram Center (CEDAI) Jan. 2013
(Principal Investigator: Dr. Steffen Hartel)

- Assessed and compared technical specifications and software interface of virtual microscopy scanners.
- Collaborated with fellow intern on a 20-page preliminary scanner assessment report.
- Prepared and tested computer-based microscope equipment to operate spermogram software.
- Composed configuration manual for CEDAI computer equipment with fellow intern.

TEACHING EXPERIENCE

UNIVERSITY OF TEXAS AT AUSTIN

• *Teaching Assistant, Chemical Engineering Materials (CHE 350), Prof. Delia Milliron* Spring 2017
Assisted the instructor with teaching 5 lectures and 3 review sessions and exam grading. Held weekly office hours. Designed weekly homework assignment and quizzes.

• *Teaching Assistant, Chemical Engineering Thermodynamics (CHE 322), Prof. Thomas Edison* Spring 2016
Assisted the instructor with teaching the recitation section and exam grading. Held weekly office hours.

• *Graduate Assistant, Texas Research Experience (TREX) Seminar* Fall 2015-Spring 2016
Assisted the instructors with syllabus design, reading progress reports, reviewing student presentations, and other in-class activities.

UNIVERSITY OF MARYLAND

• *Teaching Fellow, Chemical Kinetics and Reactor Design (CHBE 440), Prof. Srinivasa Raghavan* Fall 2013
Assisted the instructor with homework and exam grading. Held weekly office hours.

JOHNS HOPKINS UNIVERSITY CENTER FOR TALENTED YOUTH

- *Program Assistant- "Numbers: Zero to Infinity."* Summer 2012
Collaborated with instructor to manage classroom of 12 rising 5th and 6th graders. Designed handouts to reinforce challenging material (scientific notation, unit conversion, algebra problems).

LEADERSHIP EXPERIENCE

- **Co-Chair Society of Women in Engineering (SWE)** 2017-2018
Graduate Chapter, The University of Texas at Austin
- **Laboratory Safety Coordinator** 2015- 2017
Milliron Group, The University of Texas at Austin

HONORS AND AWARDS

- Good Neighbor Scholarship (for international students at UT Austin) 2015-2018
- Cockrell School of Engineering Fellowship 2014-2015 and 2017-2018
- ASPIRE Research Scholarship, Maryland Technology Enterprise Institute (MTech) Fall 2013
- Lake Parcan Scholarship 2013-2014
- Donald T. Bonney and Knust Memorial Scholarships Fall 2012-Spring 2013
- A. James Clark School of Engineering Dean's List and Academic Honors 2010-2014

PUBLICATIONS

- **Saez Cabezas, C.A.**, Jadrich, R.B., Ong, G.K, Truskett, T.M., Milliron, D.J. "Gelation of plasmonic metal oxide nanocrystals by polymer-induced short-range attractions", 2017, *In Preparation*.
- **Saez Cabezas, C.A.**, Miller, K., Heo, S., Leblanc, G., Milliron, D.J. "Direct Electrochemical Deposition of Conformal Transition Metal Oxide Thin Films from Polyoxometalates", 2017, *In Preparation*.
- Guillaussier, A., Yu, Y., Voggu, V., Aigner, W., **Saez Cabezas, C.A.**, Houck, D., Shah, T., Smilgies, D.M., Pereira, R., Stutzmann, M., Korgel, B. "Silicon Nanocrystal Superlattice Nucleation and Growth", 2017, *Submitted*.
- Llordés, A., Wang, Y., Fernandez-Martinez, A., Xiao, P., Lee, T., Poulain, A., Zandi, O., **Saez Cabezas, C.A.**, Henkelman, G., Milliron, D.J. "Linear topology in amorphous metal oxide electrochromic networks obtained via low-temperature solution processing", *Nature Materials*, 2016, DOI:10.1038/nmat4734.

PRESENTATIONS

- **Saez, Cabezas, C.A.**, Singh, A., Lindquist, B.A., Ong, G.K., Jadrich, R.B., Singh, A., Truskett, T.M., Milliron, D.J. "Assembly of Colloidal Nanocrystals into Open and Functional Networks," Engineering Conference International (ECI) Association in Solution IV, 3 August, 2017, Poster.
- **Saez Cabezas, C.A.**, Jadrich, R.B., Ong, G.K., Truskett, T.M., Milliron, D.J. "Assembly of Tin-Doped Indium Oxide Nanocrystals into Three-Dimensional Plasmonic Gels via Depletion-Attraction Interactions," Materials Research Society (MRS), Session NM3.8, 19 April 2017, Oral Presentation.

SKILLS

Laboratory Techniques: colloidal nanocrystal synthesis, Schlenk line, Glovebox

Computer Applications: Igor Pro, Mathematica, Matlab, ImageJ, Adobe Illustrator

Characterization Techniques: RAMAN/FTIR/UV-VIS Spectroscopy, Scanning Electron Microscopy (SEM/STEM), Small Angle X-Ray Scattering (SAXS), Dynamic Light Scattering (DLS) and Zeta Potential, Brightfield Microscopy, Thermogravimetric Analyzer (TGA), Energy Dispersive X-ray Spectroscopy (EDX)

Languages: Spanish (Native), French (Fluent), Italian (Beginner)

EXTRACURRICULAR ACTIVITIES

Student Organizations at the University of Texas at Austin: Society of Women in Engineering (SWE), Chemical Engineering Women (CheW), Equal Opportunity in Engineering (EOE), Chemical Engineering Graduate Leadership Council (GLC)

Student Organizations at the University of Maryland: TAU BETA PI Engineering Honors Society, Successful Engineer Education Development Support (SEEDS), FLEXUS-Women in Engineering Living and Learning Community, Engineers Without Borders (EWB), American Institute of Chemical Engineers (AIChE)