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Curriculum Vitae

Zarui Sara Chikneyan

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Zarui Sara Chikneyan is academically trained as an analytical chemist with BS/MS degree. She has experience working as a quality control scientist in the pharmaceutical sector, as well as lithium ion battery development engineer in alternate energy industry and academia. Her early research at Caltech focused on development of Li-rich Layered Metal Oxide cathode materials and understanding solid electrolyte interphase formation (SEI) on the Li anode surface. Currently Zara shifted her research toward environmental chemistry and is focusing on developing Aptamer based biosensor for Point-of-Use microbial detection. Ideally she is interested in applying her analytical thinking, engineering experience in the industry and core scientific practices to take R&D concepts through new product development and production.

EDUCATION

- M.Sci.(Analytical Chemistry) - California State University (2006)
  Thesis: "Electrochemical Studies of Immobilized Proteins and Their Interactions with Solution Species."
- B.Sci. (Chemistry) - University of California Riverside (2004)

EXPERIENCE

- 2014-current - Battery Engineer/ Researcher - California Institute of Technology, Pasadena, CA 91125
- 2013-2014 - Battery Engineer - Zeptor Corporation**,** San Jose, CA 95134
- 2012-2013 - Battery Research Engineer - Amprius, Inc **,** Sunnyvale, CA 94089
- 2007-2012 - Lithium-Ion Battery R&D Engineer - Quallion, LLC**,** Sylmar, CA 91342
- 2006-2007 - Laboratory Associate - Baxter Pharmaceuticals**,** Los Angeles, CA 90039
- 2003-2006 - Research Assistant - California State University Los Angeles**,** Los Angeles, CA 90032

PUBLICATIONS

- Lithium batteries: Improving solid-electrolyte interphases via underpotential solvent electropolymerization. *Chemical Physics Letters*, **2016**, 661 , 65–69
- Capture of p53 by Electrodes Modified with Consensus DNA Duplexes and Amplified Voltammetric Detection Using Ferrocene-Capped Gold Nanoparticle/Streptavidin Conjugates. *Anal. Chem.,* **2008**, 80, 769-774
- Redox Reactions of Copper Complexes Formed with Different β-Amyloid Peptides and Their Neuropathalogical Relevance. *Biochemistry*, **2007**, *46* (32), 9270–9282

- Sensitive Detection of Sulfhydryl Groups in Surface-Confined Metallothioneins and Related Species via Ferrocene-Capped Gold Nanoparticle/Streptavidin Conjugates. *Environ. Sci. Technol.*, **2005**, *39* (5), 1209–1213
- Attachment of Ferrocene-Capped Gold Nanoparticle/Streptavidin Conjugates onto Electrode Surfaces Covered with Biotinylated Biomolecules for Enhanced Voltammetric Analysis. *Electroanalysis*, **2004**, 16 (1-2), 73-80.
- Polyelectrolyte-Mediated Assembly of Copper Phthalocyanine Tetrasulfonate Multilayers and the Subsequent Production of Nanoparticulate Copper Oxide Thin Films. *J. Nanosci. Nanotech*. **2003**, 4, 1–7

PATENTS

- Packaging with terminal for multiple battery power system: U.S. Patent 8,679,666 B1. (2014)
- Silicon laminate cells for lithium ion batteries: (2015) Patent Pending.

AWARDS / FELLOWSHIPS

- National Science Foundation Fellowship Award Winner - (2004-2006)
- Alumni Certificate of Honors 2005 *(CSULA)*

OTHER

- Fluent in Armenian and Russian; Proficient in spoken Spanish
- Long Beach Police Crime Lab Volunteer: 2006-2007
- Paradise Adult Day Care Volunteer: 2000-2004
- Hobbies: Dancing, Hiking, Traveling , Music