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RESEARCH FIELDS

- Green synthesis and characterization of noble metal nanoparticles and their application in biomedical applications.
- Solution and aerosol-based synthesis of transition metal oxide nanostructures and thin films for optoelectronic applications.

PROFESSIONAL POSITIONS

07/2015 - Present	TECNOLOGICO DE MONTERREY <i>Research Professor</i> <i>Photonics and Quantum Systems Group, School of Engineering and Sciences</i> <i>Department of Chemistry and Nanotechnology</i>	Monterrey, Mexico
2011 - 2014	UNIVERSITÄT LEIPZIG <i>Research Assistant</i> <i>Research group: Solid State Chemistry/Materials Science</i>	Leipzig, Germany
2007-2008	TECNOLOGICO DE MONTERREY <i>Research Assistant</i> <i>Department of Chemistry (now Department of Chemistry and Nanotechnology)</i>	Monterrey, Mexico
2006	CAESAR (Center of Advanced European Studies and Research) <i>Research Assistant</i> <i>Research group: Nanoparticle Technology Group</i>	Bonn, Germany

EDUCATION

2008 - 2013	UNIVERSITÄT LEIPZIG <i>Doctor of Natural Sciences (Chemistry)</i>	Leipzig, Germany
2002 - 2007	TECNOLOGICO DE MONTERREY <i>Bachelor of Science in Chemistry</i>	Monterrey, Mexico

HONORS AND AWARDS

2017	Mexico's National System of Researchers, SNI – Level I CONACyT, Mexico
04/2016	Workshop in Micro/Nanofabrication Massachusetts Institute of Technology (MIT), Cambridge, Boston, USA
09/2008-09/2011	Scholarship for doctoral studies at Universität Leipzig Excellence Graduate School "Leipzig School of Natural Science –Building with Molecules and Nano-objects (BuildMoNa)", Leipzig, Germany
06-07/2008	International Summer Research Program Nanosystems Initiative Munich (NIM), Munich, Germany

PUBLICATIONS (2015-PRESENT)**Peer-reviewed Journal Articles**

8.	David Medina Cruz, Ebrahim Mostafavi, Ada Vernet Crua, Hamed Barabadi, Veer; Veer Shah, <u>Jorge L. Cholula-Díaz</u> , Gregory Guisbiers and Thomas Webster. "Green nanotechnology-based zinc oxide (ZnO) nanomaterials for biomedical applications: a review". <i>J Phys Mater</i> 2020 (In press). - Review
7.	Ebrahim Mostafav, David Medina Cruz, Ada Vernet-Crua, Junjiang Chen, <u>Jorge L. Cholula-Díaz</u> , Gregory Guisbiers, Juan Tao and Thomas J. Webster. "Green nanotechnology-based drug delivery systems for osteogenic disorders". <i>Expert Opinion on Drug Delivery</i> 2020 , 17: 341-356. - Review
6.	David Medina, William Tien-Street, Bohan Zhang, Xinjing Huang, Ada Vernet Crua, Alfonso Nieto-Argüello, <u>Jorge L. Cholula-Díaz</u> , Lidia Martínez, Yves Huttel, María Ujué González, José Miguel García-Martín and Thomas J. Webster. "Citric Juice-mediated Synthesis of Tellurium Nanoparticles with Antimicrobial and Anticancer Properties." <i>Green Chem</i> 2019 , 21: 1982-1998.
5.	Diana Lomelí-Marroquín, David Medina Cruz, Alfonso Nieto-Argüello, Ada Vernet Crua, Alejandro Torres-Castro, Thomas J. Webster and <u>Jorge L. Cholula-Díaz</u> . "Starch-mediated synthesis of mono- and bimetallic silver/gold nanoparticles as antimicrobial and anticancer agents". <i>Int J Nanomedicine</i> 2019 , 14: 2171-2190.
4.	Ada Vernet Crua, David Medina, Bohan Zhang, María Ujué González, Yves Huttel, José Miguel García-Martín, <u>Jorge L. Cholula-Díaz</u> and Thomas J. Webster. "Comparison of cytocompatibility and anticancer properties of traditional- and green-chemistry synthesized tellurium nanowires". <i>Int J Nanomedicine</i> 2019 , 14: 3155-3176.
3.	<u>Jorge L. Cholula-Díaz</u> , Diana Lomelí-Marroquín, Bidhan Pramanick, Alfonso Nieto-Argüello, Luis A. Cantú-Castillo, and Hyundoo Hwang. "Synthesis of colloidal silver nanoparticle clusters and their application in ascorbic acid detection by SERS". <i>Colloids and Surfaces B: Biointerfaces</i> 2018 , 163: 329-335.
2.	<u>Jorge L. Cholula-Díaz</u> , J. Barzola-Quiquia, M. Videa, Ch. Yin and P. Esquinazi. "The frequency-dependent AC photoresistance behavior of ZnO thin films grown on different sapphire substrates". <i>Phys. Chem. Chem. Phys.</i> 2017 , 19: 23919-23923. - Communication
1.	<u>Jorge L. Cholula-Díaz</u> , G. Wagner, D. Friedrich, O. Oeckler, H. Krautscheid. "Synthesis of CuInS ₂ nanocrystals from a molecular complex – characterization of the orthorhombic domain". <i>Dalton Trans.</i> 2015 , 44:14227-14234. - Inside Front-cover.

Book Chapters

2.	D Medina-Cruz, B Saleh, A Vernet-Crua, A Nieto-Argüello, D Lomelí-Marroquín, L Y Vélez-Escamilla, <u>J L Cholula-Díaz</u> , J M García-Martín and T Webster. Bimetallic Nanoparticles for Biomedical Applications: A Review. In <i>Racing for the Surface: Antimicrobial and Interface Tissue Engineering</i> . B Li, T Fintan Moriarty, T Webster, M Xing, Eds. Springer Nature Switzerland, 2020; pp 397-434.
1.	D Medina-Cruz, W Tien-Street, A Vernet-Crua, B Zhang, X Huan, A Murali, J Chen, Y Liu, J M Garcia-Martin, J L. Cholula-Díaz, T Webster. Tellurium, the Forgotten Element: A Review of the Properties, Processes, and Biomedical Applications of the Bulk and Nanoscale Metalloid. In <i>Racing for the Surface: Antimicrobial and Interface Tissue Engineering</i> . B Li, T Fintan Moriarty, T Webster, M Xing, Eds. Springer Nature Switzerland, 2020; pp 723-783.