# José García Cerrillo Curriculum Vitae



**Date and place of birth:** May 24<sup>th</sup>, 1990

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### **Education**

2014-2016 M. Eng., Energy, with Honors, Institute for Renewable Energies, National

Autonomous University of Mexico (UNAM)

2008-2013 B. Sc., Chemical Engineering, with Honors, Faculty of Chemical

Engineering, Universidad Michoacana de San Nicolás de Hidalgo (UMSNH)

### **Publications**

Granados, A., Hu, H., "Improvement of the morphological and electrical characteristics of Al<sup>3+</sup>, Fe<sup>3+</sup> and Bi<sup>3+</sup>-doped TiO<sub>2</sub> compact thin films and their incorporation into hybrid solar cells", *Mat. Sci. Semicon. Proc.* 2017, 72, 106-114.

2016 Hernández-Granados, A., Escorcia-García, J., Pérez-Martínez, D., García-Cerrillo, J., Menchaca-Campos, C., Hu, H., "Sb<sub>2</sub>(S<sub>x</sub>Se<sub>1-x</sub>)<sub>3</sub> sensitized solar cells prepared by solution deposition methods", *Mat. Sci. Semicon. Proc.* 2016, 56, 222-227.

#### **Awards and Honors**

Winner of the Prize "Dr. Santiago Cendejas Huerta" awarded by the Academy of Sciences of Michoacán for the best undergraduate thesis in the area of Biology and Chemistry.

Winner of the Prize "Padre de la Patria" in virtue of having obtained the highest grade average in the 5<sup>th</sup> module of the Faculty of Chemical Engineering, UMSNH.

- 2013 Recipient of an Outstanding Performance recognition in the General Undergraduate Exit Exam of Chemical Engineering (EGEL-IQ) applied by the National Evaluation Center for Higher Education, A. C. (CENEVAL).
- 2012 Recipient of the silver medal in the 1<sup>st</sup> State Contest of Projects of Science and Technology "2012 Michoacán Exposciences" with the work entitled "Study of the adsorption of ethanol with magnesium phosphate hydrate".
- Winner of the Prize "Padre de la Patria" in virtue of having obtained the highest grade average in the 2<sup>nd</sup> module of the Faculty of Chemical Engineering, UMSNH.
- 2009 Winner of the Prize "Padre de la Patria" in virtue of having obtained the highest grade average in the 1<sup>st</sup> module of the Faculty of Chemical Engineering, UMSNH.
- 2007 Winner of the 2<sup>nd</sup> place of the XVII State Olympiad of Chemistry, level B (General Chemistry), and member of the preliminary team that represented the state of Michoacán at the National Olympiad of Chemistry held at Oaxaca, Oaxaca, Mexico.

## **Participation in Conferences and Meetings**

- 2017 Rodríguez-Castañeda, C. A., Moreno-Romero, P. M., Hernández-Granados, A., García-Cerrillo, J., Zhao-Hu, H., "Multi-grid front contact integration in perovskite hybrid solar cells", oral presentation at the XXVI International Materials Research Congress, August 20-25, 2017, Cancún, Quintana Roo, México.
- 2017 Moreno-Romero, P. M., Corpus-Mendoza, A. N., Hernández-Granados, A., García-Cerrillo, J., Rodríguez-Castañeda, C. A., Zhao-Hu, H., "Strontium replacement in organometallic halide perovskite solar cells", oral presentation at the XXVI International Materials Research Congress, August 20-25, 2017, Cancún, Quintana Roo, México.
- 2017 Torres-Herrera, D. M., Díaz-Cruz, E. B., Moreno-Romero, P. M., Baray-Calderón, A., Hernández-Granados, A., García-Cerrillo, J., Castillo-Palomera, R., Zhao-Hu, H., "Thermal evaporation of Bi<sub>2</sub>S<sub>3</sub> ultra-thin films for hybrid solar cells applications", oral presentation at the XXVI International Materials Research Congress, August 20-25, 2017, Cancún, Quintana Roo, México.
- Granados, A., Castelo-González, O. A., Zhao-Hu, H., "Development of Al³+ and Fe³+ co-doped TiO₂ compact films and their application in hybrid solar cells with a mixed tin-lead perovskite and Sb₂S₃ photoabsorbing nanoparticles", poster presented at the 2017 Materials Research Society (MRS) Spring Meeting & Exhibit, April 17-21, 2017, Phoenix, Arizona, U. S. A.
- 2017 Hernández-Granados, A., Escorcia-García, J., Pérez-Martínez, D., García-Cerrillo, J., Menchaca-Campos, C., Zhao-Hu, H., "Towards the improvement of the antimony sulfide-selenide sensitized solar cells- Effect of mesoporous TiO<sub>2</sub> annealing and CdS interlayer", poster presented at the 2017 Materials Research Society (MRS) Spring Meeting & Exhibit, April 17-21, 2017, Phoenix, Arizona, U. S. A.
- 2016 Hernández-Granados, A., Escorcia-Garcia, J., Perez-Martinez, D., Hu, H., Menchaca-Campos, E. C., García-Cerrillo, J., "Photovoltaic performance of solid state heterojunctions with Sb<sub>2</sub>S<sub>x</sub>Se<sub>3-x</sub> sensitized mesoporous TiO<sub>2</sub> layers", poster presented

- at the 2016 Materials Research Society (MRS) Spring Meeting & Exhibit, March 28-April 1, 2016, Phoenix, Arizona, U. S. A.
- 2015 García-Cerrillo, J., Moreno-Romero, P. M., Baray-Calderón, A., Hu, H., "Impact on the conductivity of double-layer compact TiO<sub>2</sub> photoanodes through chemical modification with trivalent cations", poster presented at the 2015 Materials Research Society (MRS) Fall Meeting & Exhibit, November 29-December 4, 2015, Boston, Massachusetts, U. S. A.
- 2015 Moreno-Romero, P. M., Rodriguez, C. A., García-Cerrillo, J., Contreras, A., Martinez, C., Hu, H., "Study of potential inhibitors to limit degradation of organometallic halides perovskites", poster presented at the 2015 Materials Research Society (MRS) Fall Meeting & Exhibit, November 29-December 4, 2015, Boston, Massachusetts, U. S. A.
- 2012 Alejo-Guerra, D., Castillo-Estrada, G., García-Cerrillo, J., Campuzano-Calderón, O., Serna-González, M., Ponce-Ortega, J. M., "Rigorous Optimization of Cooling Towers using Genetic Algorithms", poster presented at the XXXIII National Meeting and II International Congress of the Mexican Academy of Research and Teaching in Chemical Engineering (AMIDIQ). May 2012, San José del Cabo, Baja California Sur, México. Conference Proceedings' ISBN: 978-607-507-121-3.
- García-Cerrillo J., Saucedo-Luna, J., Castro-Montoya, A. J., "Study of the adsorption of ethanol with magnesium phosphate hydrate", poster presented at the XXXIII National Meeting and II International Congress of the Mexican Academy of Research and Teaching in Chemical Engineering (AMIDIQ). May 2012, San José del Cabo,

### Research-related and Professional activities

- 2013 Professional trainee at the food company Saporis Comercial S. A. de C. V. in the area of Research, Product Development and Technical Service.
- 2012 Participant in the XXII Summer of Scientific Research of the Mexican Academy of Sciences (AMC) with a research stay at the Superior School of Chemical Engineering and Extractive Industries of the National Polytechnic Institute.
- 2011 Participant in the XVI Summer of Scientific and Technological Pacific's Research (*Delfin* program) with a research stay at the Faculty of Chemical Engineering, UMSNH.
- 2009 Member of the Coordination for the Scientific and Technological Promotion "Youth Technosciences" and Assistant Coordinator in the II State Contest of Science and Technology "2009 Morelia Youth Technosciences".