



## Enrico Castro Grespan

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Zip:78216 San Luis Potosí, S.L.P, México Passport: G11070035 Age: 23 Single  
Engineering Physics, Student at a Master Program in Renewable Energies Engineering at IER-UNAM

## Experience

### **INVESTIGATIONS, IPICYT, SLP – 2015-2016**

*Synthesis of PEDOT:Tos and PEDOT:PSS by chemical oxidation and characterization of electrochromic and optical properties for the application in electro-optics devices* project at the Advanced Material Department at IPICYT (The Institute for Scientific and Technological Research of San Luis Potosí), accomplishing PEDOT:Tos and PEDOT:PSS synthesis, properties analysis by UV-Vis-IR spectroscopy, Raman spectroscopy, infrared spectroscopy, infrared ellipsometry and electrochromic properties measurements of PEDOT through color changes by applying an electric field, as a laboratory assistant of Dr. Román Sandoval Lopez (SNI III).

### **INVESTIGATION, IICO; SLP – 2015-2016**

*Infrared optical study of organic thin films* at the FTIR and ellipsometry area of IICO (The Institute for Optical Communication Research) of the Autonomous University of San Luis Potosí; doing surface preparation of Si substrates, organic films depositions, PEDOT synthesis. Tutored by Dr. José Manuel Flores Camacho (SNI I).

### **INVESTIGATION, IICO; SLP – 2016**

*Automation of photovoltaic panel testing station* at the Technological Project area of IICO (The Institute for Optical Communication Research) of the Autonomous University of San Luis Potosi. Programming and hardware calibration with LabVIEW software. Tutored by Dr. Oscar Fernando Nuñez Olvera and Dr. Alfonso Lastras Martínez.

### **SOCIAL SERVICE, INFRARURAL-SES2017; MERIDA**

Installations of Efficient Wood Stoves; providing clean cooking to the families of Sotuta (Yucatán, México) and reducing up to 576 tons of CO<sub>2</sub> emissions per year by avoiding the logging of 1600 trees and saving the families from kitchen pollution.

## Education

Complete credits: Master Degree Program of Renewables Energy Engineering. At the Institute of Renewable Energy - National Autonomous University of Mexico. With the thesis project named *"Thermographic Visualization of Energy Systems"* 2016- up to date.

Engineering Physics; Bachelors Degree. Autonomous University of San Luis Potosi (UASLP) 2012-2016 (Cédula Profesional 10080811)

- *"Rooftop Recognition for Solar Energy Potential"* at Wolfram Summer School, June 24 to July 13, 2018.
- *International Student Energy Summit 2017*, 13 - 16 June 2017, Merida, Mexico.

- MEXIREC, 11 - 13 September 2017, Mexico City, Mexico.
- *Electronic instrumentation and solar energy diploma*. September, 2012 to July, 2013. (180 hours). IICO, San Luis Potosi, Mexico.
- *2015 Ellipsometry School* course. August, 2015 (40 hours). IICO, San Luis Potosi, Mexico.

## Expositions

- "*Heat Transfer in Photovoltaic Devices*" XVI Congreso Ibérico y XII Congreso Iberoamericano de Energía Solar held in Madrid June 20, 21 y 22, 2018.
- "Visualization of Thermal Phenomena" speaker at "18ª Escuela de Investigación en Energía" at IER-UNAM, April 2- 6 2018, Morelos, México.
- "Antimony Sulfide Selenide ( $Sb_2S_xSe_{3-x}$ ) Thin Films of Varying Composition in Solar Cells Produced by Thermal Evaporation" oral presentation at *International Material Research Congress XXVI*, 20 - 25 August 2017, Cancun, Mexico.
- *Speckle pattern processing to measure organic and absorbent material dehydration* at the research and teaching contest *Candelario Pérez Rosales* in the XIV week of IICO, 2014.
- *Smart City* at the *Gustavo del Castillo y Gama* Instrumentation and electronic contest in the XV IICOs week, 2015.

## Aptitudes

- Infrared Thermography
- Solar Design
- Advanced English (101/120 TOEFL iBT)
- Knowledge in intellectual property and patent writing
- Advanced knowledge of programming languages (*LabVIEW* and *Mathematica*)
- Intermediate knowledge of SketchUp, C++, Java and VHDL.
- Intermediate Italian
- Leadership skills, continuous learning, commitment, responsibility, adaptation to change and team work.