## 1. DR. ARTURO PONCE PEDRAZA

**Associate Professor - Department of Physics and Astronomy**
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## 2. EDUCATION

| | | | |
|---|---|---|---|
| University of Puebla | Puebla, Mexico | Chemistry | B.S. 1997 |
| University of Puebla | Puebla, Mexico | Solid State Physics | M.S. 1999 |
| University of Cadiz | Cadiz, Spain | Mat. Sci. and Eng. | Ph.D. 2003 |
| Nanomegas Company | Brussels, Belgium | Physics | Post Doctoral, 2003 |
| UNAM/CNRS | Mexico/France | Physics | Post Doctoral 2005-2007 |

## 3. ACADEMIC EXPERIENCE

**Tenured Associate Professor**
- Department of Physics and Astronomy.
University of Texas at San Antonio, 09/2016-present

**Assistant Professor**
- Department of Physics and Astronomy.
University of Texas at San Antonio, 09/2013-08/2016

**Professor and Researcher**
- Departamento de Ingeniería Mecánica
Instituto Tecnológico y de Estudios Superiores de Monterrey Ciudad de México, ITESM. 01/2004-12/2007

## 4. NON- ACADEMIC EXPERIENCE

**Director**
- Kleberg Advanced Microscopy Center
Department of Physics and Astronomy.
University of Texas at San Antonio, 02/2011-08/2013

**Group leader**
- Laboratory for Electron Microscopy
Centro de Investigación en Química Aplicada, CIQA, 01/2008-02/2011

## 5. CERTIFICATIONS OR PROFESSIONAL REGISTRATIONS

-Diploma in Education "Programa de Desarrollo de Habilidades Docentes (PDHD)" Instituto Tecnologico y de Estudios Superiores de Monterrey Campus Mexico City. September 2004

## 6. CURRENT MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

**1.** Member of external evaluator committee at the Advanced Materials Research Center (CIMAV)-CONACYT Mexico since January 2016.
**2.** Member of National System of Researchers SNI-Level II CONACYT, Mexico. 2005-present
**3.** Reviewer (ad hoc) for numerous science journals, some such as: ACS Nano, ACS Appl. Nano Mat., J. Alloys Comp., Micron, Fuel, J. Mater. Chem. C., Int. J. Hydrog. Energy and others.
**4.** Member of Microscopy Society of America since 2012
**5.** Member of American Physics Society since 2014
**6.** Member of Materials Research Society since 2011
**7.** Member of Mexican Society of Microscopy since 2006

## 7. HONORS AND AWARDS

1. Outstanding teaching award: Instituto Tecnológico y de Estudios Superiores de Monterrey - Ciudad de México, Mexico 2007.
2. Graduated with honors (Cum Laude), Award to the best Ph.D. Thesis, Universidad de Cádiz
3. Young Scientist Award: European Microbeam Analysis Conference, Spain 2003.

**8. Funding history, received in the past five (5) years.**

**1. Principal Investigator: Army Research Office-Department of Defense (DOD)**

Project title: Dual Beam System (SEM/FIB) Equipment for The Kleberg Advanced Microscopy Center, ARO award number: 64756-RT-REP / Awarded amount: $500,000.00

**2. Co- Principal Investigator: National Science Foundation (NSF)**

Project title: Alloys at the Nanoscale; The Case of Nanoparticles Second Phase
NSF award number: DMR-1103730. / Awarded amount: $390,000.00.

**9. PUBLICATIONS (selected refereed publication out of 140)**


1. J. Cantu-Valle, E. Diaz Barriga-Castro, V. Vega, J. García, R. Mendoza-Resendez, C. Luna, V. M. Prida, K. Nielsch, F. Mendoza-Santoyo, M. Jose-Yacaman, **A. Ponce**, "Quantitative magnetometry analysis and structural characterization of multi-segmented Co-Ni nanowires" J. Magn. Magn. Mater. **379** (2015) 294–299.
2. J. Cantu-Valle, I. Betancourt, J.E. Sanchez, F. Ruiz-Zepeda, M.M. Maqableh, F. Mendoza-Santoyo, B.J.H. Stadler, **A. Ponce**, "Mapping the Magnetic and Crystal Structure in Cobalt Nanowires" J. Appl. Phys. **118** (2015) 024302.
3. A. J. Mannix, X. Zhou, B. Kiraly, J. D. Wood, D. Alducin, B. D. Myers, X. Liu, B. L. Fisher, U. Santiago, J. R. Guest, M.J. Yacaman, **A. Ponce**, A. R. Oganov, M. C. Hersam, N. P. Guisinger, "Synthesis of Borophene: an anisotropic, two-dimensional boron allotrope" Science **350** (2015) 1513-1516.
4. E. Ortega, **A. Ponce**, U. Santiago, D. Alducin, A. Benitez-Lara, G. Plascencia-Villa, M. José-Yacamán, "Structural damage reduction in protected gold clusters by electron diffraction methods" Advanced Structural and Chemical Imaging, **2:12** (2017) 1-7.
5. E. Ortega, U. Santiago, J.G. Giuliani, C. Monton, **A. Ponce**, "*In-situ* magnetization/heating electron holography to study the magnetic ordering in arrays of Nickel metallic nanowires" AIP Advances, **8** (2018) 056813.
6. Y.L. Casallas-Moreno, D. Cardona, E. Ortega, C.A. Hernandez-Gutierrez, S. Gallardo-Hernandez, L.A. Hernandez-Hernandez, H. Gomez-Pozos, A. Ponce, G. Contreras-Puente, M. Lopez-Lopez, "High cubic phase purity and growth mechanism of cubic InN thin-films by migration enhanced epitaxy" Thin Solid Films, 647 (2018) 64-69.
7. E. Ortega, S. M. Reddy, I. Betancourt, S. Roughani, B. J. H. Stadler, A. Ponce, "Magnetic ordering in 45 nm-diameter multisegmented FeGa/Cu nanowires: single nanowires and arrays" J. Mater. Chem. C, 5 (2017) 7546-7552.
8. A. Bruma, U. Santiago, D. Alducin, G. Plascencia-Villa, R. L. Whetten, A. Ponce, M. Mariscal, M. José-Yacamán, "Structure determination of superatom metallic clusters using rapid scanning electron diffraction" J. Phys. Chem. C. 120 (2016) 1902-1908.


**10. PROFESSIONAL DEVELOPMENT ACTIVITIES**

Conferences (Organization) and Editor:

- Mexican Society of Microscopy, Organizer of the IX and X National Congress of Microscopy.
- Chair of the XXVI International Materials Research Congress (MRS) 2017, Cancun, Mexico.
- Chair of the Advanced Electron Microscopy School Series:
  - -1st Advanced Electron Microscopy School at the AEM-NANOMAT, 2009 (Saltillo, Mexico)
  - -2nd Advanced Electron Microscopy School at the CIASEM'11, 2011 (Merida, Mexico)
  - -3rd and 4th Advanced Electron Microscopy School, (2014-2015) (San Antonio, TX)
- Editor: Materials Science Forum Vol. 644 (2010): Advanced Electron Microscopy. Trans Tech Publications, doi:10.4028. http://www.scientific.net/MSF.644/4
- Reviewer (ad hoc) for numerous science journals, some such as: ACS Nano, ACS Appl. Nano Mat., J. Alloys Comp., Micron, Fuel, J. Mater. Chem. C., Int. J. Hydrog. Energy, Appl. Phys. Lett.