

CURRICULUM VITAE

Cecilia Noguez

PERSONAL INFORMATION

Name, Surname Cecilia, Noguez
Telephone ++52-55-56225106
Email cecilia@fisica.unam.mx
Website <https://www.fisica.unam.mx/cecilia/>
Nationality Mexican
Place and Date of birth Mexico City, July 17, 1966
Married. Two children.

WORK EXPERIENCE

Dates (from – to) **August 2005 – present**
Name of employer Instituto de Física, Universidad Nacional Autónoma de México (UNAM)
Occupation or position held Full Professor of Physics (Investigador Titular C)
Main activities and responsibilities Research in Theoretical and Computational Condensed Matter Physics. Lecturer and supervisor of physics curricula courses and students at the undergraduate and graduate levels

Dates (from – to) **August 2010 – July 2011**
Name of employer Department of Chemistry, Northwestern University
Occupation or position held Invited Professor
Main activities and responsibilities Research in Theoretical and Computational Condensed Matter Physics.

Dates (from – to) **June 2003 – July 2005**
Name of employer Instituto de Física, Universidad Nacional Autónoma de México (UNAM)
Occupation or position held Associate Professor of Physics (Investigador Titular B)

Dates (from – to) **August 2000 – December 2000**
Name of employer Department of Physics and Astronomy, Ohio University
Occupation or position held Invited Professor
Main activities and responsibilities Research in Theoretical and Computational Condensed Matter Physics.

Dates (from – to) **November 1999 – May 2003**
Name of employer Instituto de Física, Universidad Nacional Autónoma de México (UNAM)
Occupation or position held Assistant Professor of Physics (Investigador Titular A)

Dates (from – to) **October 1995 – October 1999**
Name of employer Instituto de Física, Universidad Nacional Autónoma de México (UNAM)
Occupation or position held Associate Researcher (Investigador Asociado C)

Dates (from – to) **August 1995 – July 1996**
Name of employer Department of Physics and Astronomy, Ohio University
Occupation or position held Postdoctoral Research Assistant
Main activities and responsibilities Development of a DFT code to study optical properties of surfaces and clusters working with Profs. Sergio E. Ulloa & David A. Drabold

Dates (from – to) **October 1988 – October 1992**
 Name of employer Facultad de Ciencias Universidad Nacional Autónoma de México (UNAM)
 Occupation or position held Teaching Assistant
 Main activities and responsibilities Lecturer of physics curricula courses

EDUCATION AND TRAINING

Dates (from – to) **February 1993 – July 1995**
 University Universidad Nacional Autónoma de México
 Principal subjects, occupational skills covered Optical properties of low dimensional systems: Effective medium theories of optical properties of nanocomposites using classical electromagnetism. Supervisor: Prof. Rubén G. Barrera (UNAM). Semiconductor surfaces using quantum mechanical approaches like DFT and semiempirical tight-binding. Supervisor: Prof. Rodolfo Del Sole (Univ. Roma 2, Tor Vergata)
 Title of qualification awarded Ph.D. or Doctorado en Ciencias (Física)

Dates (from – to) **August 1990 – January 1993**
 University Universidad Nacional Autónoma de México
 Principal subjects, occupational skills covered Comprehensive or General Examination
 High Level Quantum Mechanics, Electrodynamics, Statistical Physics, Analytical Mechanics, & Solid State Physics
 Title of qualification awarded M. Sc. or Maestria en Ciencias (Física)

Dates (from – to) **November 1984 – May 1990**
 University Universidad Nacional Autónoma de México
 Principal subjects, occupational skills covered Effective medium theories of optical properties of nanocomposites
 Supervisor: Prof. Rubén G. Barrera
 Title of qualification awarded B. Sc. in Physics or Física

RESEARCH ACTIVITIES

Research sectors Theoretical and Computational Physics
 Research sectors Condensed Matter Physics
 Research scientific activities Theory and numerical modeling of nanoscale materials, atomic clusters and surfaces. My research includes studies to predict and understand the atomic, electronic and optical properties of nanomaterials; combining first-principles and electromagnetic theories in plasmonic systems, low-dimensional carbon nanostructures, semiconductors, atomic adsorption processes, van der Waals and Casimir forces. Additionally, I have developed new computational methods to study these physical properties on large-scale nanostructures

Founded projects since 2012:

2018 – 2018 **Electronic and optical properties of bidimensional heterostructures**
 DGAPA IN109618
 Role: Principal Investigator
 Budget: \$200,000 MX pesos

2017 – 2018 **Radiative Heat Transfer in Plasmonic Nanostructures**
 CIC-UNAM (Original by CONACYT FDC_2015-2_1290)
 Role: Principal Investigator
 Budget: \$4,000,000 MX pesos

- 2016 – 2018 [Assessment of Exchange-Correlation Functionals of the Description and Prediction of Electronic and Optical](#)
US-AFOSR FA9550-16-1-0143
Role: Principal Investigator
Budget: \$79,500.00 US dollars
- 2015 –2017 [Electromagnetic field enhancement using metallic nanoparticles](#)
DGAPA-UNAM IN107615
Role: Principal Investigator
Budget: \$ 627,168.00 MX pesos
- 2014 –2015 [Investigation of Plasmon-Enhanced Visible Light Photoactivity of Titanium Dioxide Photoelectrodes for Solar Water Oxidation](#)
Univ. California MEXUS-CONACYT Collaborative Research Grants
Role: Principal Investigator
Budget: \$25,000 US dollars
- 2014 – 2016 [High sensitive spectroscopies based on plasmonics for the detection of ambient and biological molecules](#)
CONACyT-SRE 191767
Role: Principal Investigator
Budget: \$692,242.00 MX pesos
- 2013 –2016 [Plasmonics for enhanced optical spectroscopies](#)
CONACyT 179454
Role: Principal Investigator
Budget: \$1,250,000.00 MX pesos
- 2012 – 2014 [Optical Activity and plasmonics](#)
DGAPA-UNAM IN104212
Role: Principal Investigator
Budget: \$605,000.00 MX pesos
- Books and Articles Over 96 peer-reviewed publications including papers in high-impact journals such as Nature Nanotechnology, Physical Review Letters, ACS Nano, Chemical Society Reviews, Journal of the American Chemical Society, Nanoscale, Journal of Physical Chemistry Letters, among others. Over 19 in the last 5 years.
- Last 5 publications:
- D Becerril, H Batiz, G Pirruccio and [Cecilia Noguez](#), “Efficient coupling to plasmonic multipole resonances by using a multipolar incident field”, ACS Photonic x (xx), pp. (2018); doi: 10.1021/acsp Photonics.7b01426
- C Morera-Boado, F Hidalgo and [Cecilia Noguez](#), “ On the stability of noble-metal nanoclusters protected with thiolate ligands”, EPL (Europhysics Letters) **119** (5), pp. 56002 (2017); doi: 10.1209/0295-5075/119/56002J
- F Hidalgo and [Cecilia Noguez](#), “How to Control Optical Activity in Organic-Silver Hybrid Nanoparticles”, Nanoscale **8** (30), pp. 14457-14466 (2016); doi: 10.1039/C6NR02372J
- C-J Kim, A Sánchez-Castillo, Z Ziegler, Y Ogawa, [Cecilia Noguez](#), and J Park, “Chiral Atomically Thin Films”, Nature Nanotechnology **11**, 520–524 (2016); doi:10.1038/nano.2016.3
- R Díaz, R Esquivel-Sirvent and [Cecilia Noguez](#), “Plasmonic Response of Nested Nanoparticles with Arbitrary Geometry”, Journal of Physical Chemistry C **120** (4), pp 2349–2354 (2016); doi: 10.1021/acs.jpcc.5b10109

ADDITIONAL INFORMATION

- Citations: More than **4250** citations according to Google Scholar with over 2220 since 2013. More than 3500 citations in ISI Web of Science and SCOPUS with a h-index=25. My research work about plasmonics published at the Journal of Physical Chemistry in 2007 is the most cited article by a single author done in Mexico in three disciplines: Physics, Chemistry, and Materials Science.
- Talks: **160 Invited talks**
137 Other Scientific communications
20 Popular talks (general audience)
- Teaching: **54 courses**
I have taught over a wide range in the physics curriculum at undergraduate and graduate levels over the years at UNAM, over 42 courses based on a semester system.
- Advising: **24 student & postdoctoral advising**
Undergraduate students: 4
Graduate students: 12
Postdoctoral fellows: 8
- Editorial work:**
- 2018 – present Editorial board of Optical Materials of Elsevier
2016 Guest editor of Ciencia, volume 67, issue 3
2014 – present Editorial board of Journal of Nanoparticle Research of Springer/Nature
2012 – present Editorial board of Ciencia, popular science magazine of the Mexican Academy of Sciences
2012 Guest editor of physica status solidi (b), volume 249, issue 6
2011 Guest editor of European Physical Journal D, volumen 63, issue 2
Regular Reviewer of 50+
Nat. Nanotechnol., J. Am. Chem. Soc., J. Phys. Chem. B, C & Letters, Phys. Rev. A, B, and Lett., ACSNano, ACSPhotonics, Appl. Phys. Lett., Nano Letters, Gold Bulletin, Sci. Reports, etc.

AWARDS & HONORS

- 2016 National Science Award, Mexican Presidency
2016 Highest Rank in the Research, Teaching, and Service. PRIDE D UNAM (Since 2006)
2016 National Researcher Level 3 CONACYT (Highest Rank) (Since 2011)
2012 Sor Juana Inés de la Cruz Award, UNAM
2010 Heberto Castillo Martinez, Mexico City Award
2009 Mexican Academy of Sciences Award in Exact Sciences
2009 Thomson Reuters Award (Institute for Scientific Information)
2008 Award to the direction of the best doctoral thesis in Material Science, UNAM (student A.L. González R.)
2008 Weizmann Prize to the direction of the best doctoral thesis Mexican Academy of Sciences (student A.L. González R.)
2006 Award to the direction of the best doctoral thesis in Material Science, UNAM (student X. López-Lozano)
2006 Distinguished University Young Professor Award UNAM
1999 Ricardo J. Zevada Foundation award for young scientists
1999 Member of the Mexican Academy of Sciences
1997 Highlight publication of the National Institute of Physics of Matter (INFM) Italy
1996 Weizmann Prize to the best doctoral thesis Mexican Academy of Sciences
1996 Gabino Barreda Medal to the best Ph. D. student in Physics in 1995 UNAM