

Curriculum Vitae

- **Name:** Rito Daniel OLGUIN MELO
- **Permanent Address:** Depto. de Física, Centro de Investigación y de Estudios Avanzados del IPN, Av. IPN # 2508, México, D.F. 07300
- **Phone & Fax:** (+52) 57 47 38 00–6121
- **Place and Date of Birth:** Zacualtipán, Hgo., México, May 22, 1961
- **Marital Status:** Married
- **Number of Children:** One
- **Education:**

B. Sc.

Physics

Escuela de Ciencias Físico–Matemáticas

Universidad Autónoma de Puebla, México.

April, 1991

M. Sc.

Physics

Physics Department, CINVESTAV–IPN, México.

February, 1994

Ph. D.

Physics

Physics Department, CINVESTAV–IPN, México.

August, 1996

- **Short Relevant Courses:**

1. RESEARCH WORKSHOP ON CONDENSED MATTER PHYSICS
ICTP, Trieste, Italy
Jul. 28–Aug. 21, 1994.
2. Workshop on “The Physics of the Electronic Behaviour in the Core Region: All–Electron LAPW Electronic Structure Calculations”.
ICTP, Trieste, Italy
22 June–4 July 1998
3. Workshop on ”Correlation effects in electronic structure calculations”,
ICTP, Trieste, Italy,
12-23 June 2000

- **Teaching Experience:**

1. Lecture on Statistical Thermodynamics,
Ph. D. Program, Chemistry Department,
CINVESTAV–IPN, México.
March–August, 1995.
2. Lecture on Statistical Thermodynamics,
Ph. D. Program, Chemistry Department,
CINVESTAV–IPN, México.
March–August, 1996.
3. Lecture on Statistical Thermodynamics,
Ph. D. Program, Chemistry Department,
CINVESTAV–IPN, México.
March–August, 1997.

4. Lecture on Mathematical Methods for Physics,
Ph. D. Program, Physics Department,
CINVESTAV-IPN, México.
September-December, 2000.

5. Lecture on Classical electrodynamics,
Ph. D. Program, Physics Department,
CINVESTAV-IPN, México.
June-August, 2000.

6. Lecture on Electronic structure and optical properties in Solid State
Physics,
Ph. D. Program, Physics Department,
CINVESTAV-IPN, México.
March-July, 2000.

- **Research Stay:**

Associate Professor,
In collaboration with M. Sc. Romeo de Coss
Applied Physics Department,
CINVESTAV-IPN, Mérida, México.
July-August, 1991.

Associate Professor,
Physics Department,
CINVESTAV-IPN, México
July 1996-August 1997.

Postdoctoral stay:
Prof. Manuel Cardona's Group,
Max Planck Institut FKF,
Stuttgart, Germany
October 1997-September 1999.

Associate Professor,
Physics Department,
CINVESTAV-IPN, México
(actual position)

Scientific Production:

- **Report at International Center for Theoretical Physics, Trieste, Italy.**

R. Baquero, R. de Coss and D. Olgún, “II-VI wide band gap semiconductor compounds under hydrostatic pressure”, ICTP-report IC/93/281, 1993.

- **Papers in Proceedings:**

1. D. Olgún and R. Baquero, “Surface states of CdTe(001)”, Proceedings of Optoelectronic Materials and their Applications. La Habana, Cuba February 18–25, 1993, eds. F. Leccabue, O. de Melo Pereira and I. Hernández Calderón, Edizioni ETS, Italy 1993, pp. 159–162.

2. D. Olgún, R. de Coss, and R. Baquero, “Two-dimensional bulk bands and surface resonances originated from (100) surfaces of III-V semiconductor compounds”, in Surfaces, Vacuum, and their Applications, eds. I. Hernández-Calderón and R. Asomoza, AIP Press 1996, pp. 61–65.

- **Contributed Papers:**

1. D. Olgún and R. Baquero, “Origin of -4.4 eV band in CdTe(001)”, Phys. Rev. B **50**, pp. 1980–1984, 1994.

2. D. Olgúin and R. Baquero, “(001)–surface–induced bulk states and surface resonances in II–VI semiconductor compounds”, Phys. Rev. B. **51**, pp. 16 891–16 897, 1995.
3. D. Olgúin, “Local density of states of II–VI ternary alloys in bulk and surfaces: an application to $\text{ZnSe}_{1-x}\text{Te}_x$ ”, Rev. Mexicana de Física **45**, 271 (1999).
4. D. Olgúin, A. Cantarero, and M. Cardona, “Temperature and isotopic mass dependence of the direct band gap in semiconductors: LCAO calculations”, physica status solidi b **220**, 33 (2000).
5. A. E. Gacía, A. Camacho, H. Navarro, D. Olgúin, and R. Baquero, “Electronic band structure of II–VI quaternary alloys in a tight–binding approach”, Rev. Mexicana de Física **46**, 249 (2000).
6. C. Ulrich, D. Olgúin, A. Cantarero, A.R. Goñi, K. Syassen, M. Cardona, and A. Chevy, “Effect of pressure on direct optical transitions of γ –InSe”, phys. stat. sol. b **221**, 777 (2000).
7. D. Olgúin, R. de Coss, and R. Baquero, “The band gap of II–VI ternary alloys in a tight–binding description”, Rev. Mexicana de Física **47**,43 (2001).
8. Z.V. Popovic, V.A. Ivanov, M.J. Konstantinovic, A. Cantarero, J. Martínez–Pastor, D. Olgúin, M.I. Alonso, M. Garriga, O.P. Khuong, A. Vietkin, and V.V. Moshchalkov, “Optical studies of gap and hopping energies in the zigzag–chain compound SrCuO_2 ”, Phys. Rev. B **63**, 165 105 (2001).
9. D. Olgúin, A. Cantarero, and M. Cardona, “Electron–phonon effects on the direct band gap in semiconductors: LCAO calculations”, Solid State Commun. **122**, 575 (2002).
10. D. Olgúin, A. Cantarero, C. Ulrich and K. Syassen, “Effect of pressure on structural properties and interband transitions of γ –InSe”, phys. stat. sol. b **235**, 456 (2003).
11. D. Olgúin and R. Baquero, “Electronic band structure of (001)–semiconductor surfaces: the frontier–induced semi–infinite–medium states”, Rev. Mexicana de Física (accepted).

12. D. Olgún, J.A. Rodríguez and R. Baquero, “Frontier–induced semi–infinite–medium states at semiconductor surfaces and interfaces” E. J. of Physics B (accepted).

México, D. F, January, 2003.

Dr. Daniel Olgún