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## LEO MENDEL D. ROSARIO

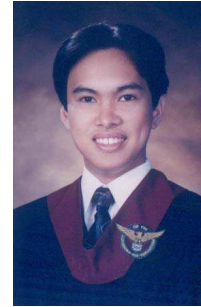
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Last CV update: March 11, 2009



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### EDUCATION

#### **Masters** (2007-Present)

MS Physics (on going), 26 units  
National Institute of Physics, University of the Philippines, Diliman

Scholarship: Faculty Development Program, Commission on Higher Education (CHED)

Current Research: Decomposition of CO<sub>2</sub> via microwave induced plasmas  
Adviser: Dr. Roy B. Tumlos

#### **Undergraduate** (2000-2005)

BS Applied Physics (2005)  
Instrumentation Physics Concentration  
National Institute of Physics, University of the Philippines, Diliman

Thesis: Studies of Microwave Power System for Plasma Generation  
Adviser: Dr. Roy B. Tumlos

#### **High School** (1996-2000)

Don Bosco Technical College, Mandaluyong

#### **Elementary** (1990-1996)

Espiritu Santo Parochial School

### CERTIFICATES (2)

[1] Civil Service Commission Career Professional Exam

[2] Don Bosco Technical College Vocational Certificate on Electronics

### PROFESSIONAL ORGANIZATIONS (2)

[1] **Samahang Pisika ng Pilipinas (SPP)**  
*Associate Member*, AY 2007 up to present  
*Referee*, 26th SPP Congress (2008)

[2] **National Research Council of the Philippines (NRCP)**, Physics Division  
Department of Science and Technology (DOST)  
*Associate Member*, AY 2008 up to present

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### WORK EXPERIENCE (6)

[1] **Assistant Professor I**, College of Arts, Sciences, and Education, FEATI University, November 2005 up to present [taught Integral Calculus (Math 221), Analytic and Solid Geometry (Math 111), Plane Trigonometry (Math 112), and Engineering Physics II (Electromagnetics, Phys 221)]

[2] **Research Assistant**, Bioimaging Group, Laser Microscopy Division, Instrumentation Physics Laboratory, National Institute of Physics, University of the Philippines, Diliman, June 2007 to September 2008

[DOST-PCASTRD Grant: Imaging of Quantum-Dot-labeled Mouse Embryos using Multi-dimensional Spectral Microscopy;

UP OPEN Grant: Development of Semiconductor Nanostructures as Optical Sensors to Quantify Anti-tumor Drug Efficacy in Animal Models]

[3] **Copy-editor**, AIP Project, ESS Manufacturing Company Inc. (EMCI), April to October 2005 as full time; November 2005 up to December 2008 as part time (copy-edited ISI Journals)

[4] **Real Property Consultant**, Paramount Group, December 2008 up to present as part time (Sales of Camella South real estate properties)

[5] **Lecturer**, High Achievers Tutorials and Review Center, March to June 2009 (handled physics review for college entrance examinations)

[6] **Student Assistant**, Plasma Physics Laboratory, National Institute of Physics, University of the Philippines, Diliman, June to October 2004 (handled some accounting and reimbursements of the financials of the laboratory and handled the procurement of the materials needed in research and related activities)

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#### RESEARCH INTERESTS

Microwave engineering, microwave plasmas, atmospheric plasma jets, fluorescence microscopy, environmental science, thin film coatings

#### RESEARCH LABORATORY AFFILIATION (2)

[1] Plasma Physics Laboratory

*Member*, Electron Cyclotron Resonance (ECR) Group, AY 2003-2005, AY 2007 up to present

*Member*, Sheet Plasma Negative Ion Source (SPNIS) Group, AY 2009 up to present

[2] Bioimaging Group, Laser Microscopy Division, Instrumentation Physics Laboratory

*Member*, June 2007 to September 2008

#### RESEARCH EXPERIENCE (7)

[1] **Development of 2.45 GHz microwave heating system for plasma generation**

Plasma Physics Laboratory, National Institute of Physics, University of the Philippines, Diliman, April 2004 to March 2005

Research Supervisor: Dr. Roy B. Tumlos

[2] **Development of atmospheric plasma jets**

Plasma Physics Laboratory, National Institute of Physics, University of the Philippines, Diliman, November 2007 up to March 2008

Research Supervisor: Dr. Henry J. Ramos

[3] **Decomposition of CO<sub>2</sub> via microwave induced plasmas**

Plasma Physics Laboratory, National Institute of Physics, University of the Philippines, Diliman, March 2008 up to February 2009

Research Supervisor: Dr. Roy B. Tumlos

[4] **Synthesis of TiAlN thin film coating using a magnetized sheet plasma source**

Plasma Physics Laboratory, National Institute of Physics, University of the Philippines, Diliman, June 2008 to September 2008  
Research Supervisor: Dr. Henry J. Ramos

**[5] Chemically, vacuum drying, plasma, and radiation treated sawdusts for wastewater treatment**

Plasma Physics Laboratory, National Institute of Physics, University of the Philippines, Diliman, March 2008 up to present  
Research Supervisor: Dr. Roy B. Tumlos

**[6] 3D imaging and spatially selective photobleaching via a multimedia projector based microscope**

Instrumentation Physics Laboratory, National Institute of Physics, University of the Philippines, Diliman, June 2007 to September 2008  
Research Supervisor: Dr. Carlo Mar Y. Blanca

**[7] Synthesis of TiCN thin film coating via graphite, acetylene, and methane using a magnetized sheet plasma source**

Plasma Physics Laboratory, National Institute of Physics, University of the Philippines, Diliman, February 2009 up to present  
Research Supervisor: Dr. Henry J. Ramos

**LOCAL PUBLICATIONS (2)**

[1] **L.M.D. Rosario** and R.B. Tumlos, *Calorimetric Measurements of the Output Power of the 2.48 GHz Commercial Magnetron*, Science Diliman Vol. 16 No. 2 (July - December 2004).

[2] D.A. Teodoro, E.C. Samson, **L.M. Rosario**, and C.M. Blanca, *Dynamic illumination patterns for contrast enhancement using commercial multimedia projector*, Pisika 1(4), 39-41 2007.

**LOCAL CONFERENCE PROCEEDINGS (10)**

[1] **L.M.D. Rosario** and R.B. Tumlos, *Calorimetric Measurements of the Output Power of the 2.48 GHz Commercial Magnetron*, Proceedings of the Samahang Pisika ng Pilipinas (22nd SPP Physics Congress), Tagbilaran, Bohol, 25-27 October 2004, p. 86.

[2] **L.M.D. Rosario** and R.B. Tumlos, *Studies of microwave power system for plasma generation*, Proceedings of the Samahang Pisika ng Pilipinas (23rd SPP Physics Congress), Jaro, Iloilo, 26-28 October 2005, p. 76.

[3] B.D. Maraña, **L.M.D. Rosario**, R.J. Teves, and C.M. Blanca *Transpiration rate of Coleus blumei by pressure monitoring*, Proceedings of the Samahang Pisika ng Pilipinas (25th SPP Physics Congress), Los Baños, Laguna, 25-27 October 2007.

[4] **L.M.D. Rosario**, J. Ting, E. Osorio, A. Ulano, M. Arciaga, and R.B. Tumlos, *Studies of power measurements in a microwave power system via a directional coupler*, Proceedings of the Samahang Pisika ng Pilipinas (25th SPP Physics Congress), Los Baños, Laguna, 25-27 October 2007.

[5] D.A. Teodoro, E.C. Samson, **L.M.D. Rosario**, and C.M. Blanca, *Dynamic illumination patterns for contrast enhancement using commercial media projector*, Proceedings of the Samahang Pisika ng Pilipinas (25th SPP Physics Congress), Los Baños, Laguna, 25-27 October 2007.

[6] **L.M. Rosario**, C. Patacsil, A. Ulano, H. Lee, Jr., M. Arciaga, and R. Tumlos, *Optical emission spectroscopy of microwave induced CO<sub>2</sub> plasma*, Proceedings of the Samahang Pisika ng Pilipinas (26th SPP Physics Congress), Baguio City, 27-29 October 2008.

[7] E.S. Osorio, **L.M. Rosario**, H. Lee, Jr., A. Ulano, M. Arciaga, and R. Tumlos, *Removal of methyl red dye from aqueous solutions using coconut product sawdust by the process of adsorption*, Proceedings of the Samahang Pisika ng Pilipinas (26th SPP Physics Congress), Baguio City, 27-29 October 2008.

[8] J.A.S. Ting, **L.M.D. Rosario**, A.M. Ulano, M.E. Arciaga, and R.B. Tumlos, *Adsorption of chromium(VI) for wastewater treatment by native sawdust*, Proceedings of the Samahang Pisika ng Pilipinas (26th SPP Physics Congress), Baguio City, 27-29 October 2008.

[9] M. Villamayor, **L.M. Rosario**, C. Lim, A. Bañas, and H. Ramos, *Synthesis of TiAlN on stainless substrate using a magnetized sheet plasma source*, Proceedings of the Samahang Pisika ng Pilipinas (26th SPP Physics Congress), Baguio City, 27-29 October 2008.

[10] C. Patacsil, A. Ulano, **L. Rosario**, H. Lee, Jr., M. Arciaga, and R. Tumlos, *Role of Hydrogen in the Ionization and Enhancement of Argon Ions in a Microwave Plasma*, Proceedings of the Samahang Pisika ng Pilipinas (26th SPP Physics Congress), Baguio City, 27-29 October 2008.

#### LOCAL CONFERENCES (5)

[1] [Presenter] Proceedings of the Samahang Pisika ng Pilipinas (22nd SPP Physics Congress), Tagbilaran, Bohol, 25-27 October 2004.

[2] [Presenter] Proceedings of the Samahang Pisika ng Pilipinas (25th SPP Physics Congress), University of the Philippines, Los Baños, Laguna, 25-27 October 2007.

[3] [Participant] First Physics Education Festival of the Samahang Pisika ng Pilipinas, Ateneo de Manila University, Katipunan, Quezon City, 26-28 May 2008.

[4] [Presenter] Proceedings of the Samahang Pisika ng Pilipinas (26th SPP Physics Congress), University of the Philippines, Baguio, Baguio City, 27-29 October 2008.

[5] [Participant] 76th General Membership Assembly of NRCP, Polkabal-Rigodon Halls, Manila Hotel, 11 March 2009.

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#### SEMINARS/WORKSHOPS/ TRAININGS (5)

[1] FEATI University First Committee for Learning Enhancement Seminar on *Designing Educational Objectives* by Dr. Benito Teehankee, Traders Hotel, Manila, 19 May 2007 (sponsored by FEATI University).

[2] *Catalyzing Change through Plasma Science and Technology*, Plasma Physics Laboratory Research and Development Workshop, National Institute of Physics, University of the Philippines, Diliman, 28 June 2008 (sponsored by Intel Education Philippines).

[3] *Lumazone Bio Imaging Training*, National Institute of Physics, University of the Philippines, Diliman, 4-7 September 2008 [sponsored by Omnibus Bio-Medical Systems, Inc. and Microimaging Applications Group (MAG)].

[4] *Thermal spray processes and applications: A special lecture cum clinic*, Lecture Hall Computer Science Building, University of the Philippines, Diliman, 17 December 2008 (sponsored by PCASTRD, DOST).

[5] *Seminar on Biological and Chemical Safety*, College of Science Auditorium, University of the Philippines, Diliman, 2 February 2009 (sponsored by College of Science and Natural Sciences Research Institute).

#### EXTRACURRICULAR ACTIVITIES (4)

[1] UP Physics Association (UPPA)  
*Member*, Projects Committee, 2<sup>nd</sup> Semester AY 2000-2001, AY 2002-2003, AY 2004-2005  
*Head*, Projects Committee, AY 2001-2002  
*President*, AY 2003-2004

[2] Diliman Learning Resource Center (DLRC)  
*Volunteer Tutor*, AY 2003-2005

[3] Scientia (College of Science Student Publication)  
*Graphics Artist and Illustrator*, AY 2004-2005

[4] Agham (College of Science Yearbook)  
*Layout Artist*, 2<sup>nd</sup> Semester, AY 2004-2005

#### SPECIAL SKILLS

- [1] Proficient in English and Filipino
- [2] Well versed in writing and copy-editing technical and scientific papers
- [3] Has experience on tutoring and teaching high school and college math and physics subjects
- [4] Has experience Microsoft and Linux office applications
- [5] Has experience in Fortran, Matlab 7, and LabVIEW 7 programs
- [6] Knowledgeable in microwave engineering, microwave discharges, vacuum systems, fluorescence microscopy, and thin film coatings
- [7] Has leadership skills

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#### REFERENCES

[1] **Dr. Henry J. Ramos**, Program Coordinator and Professor  
Plasma Physics Laboratory, National Institute of Physics,  
University of the Philippines, Diliman  
[hramos@nip.upd.edu.ph](mailto:hramos@nip.upd.edu.ph)

[2] **Dr. Roy B. Tumlos**, Associate Professor  
Department of Physical Sciences and Mathematics,  
College of Arts and Sciences,  
University of the Philippines, Manila  
[troybup@yahoo.com](mailto:troybup@yahoo.com)

[3] **Dr. Carlo Mar Y. Blanca**, Associate Professor  
Instrumentation Physics Laboratory, National Institute of Physics,  
University of the Philippines, Diliman  
[cblanca@nip.upd.edu.ph](mailto:cblanca@nip.upd.edu.ph)

[4] **Dr. Germelino F. Abito**, Dean  
College of Arts, Sciences, and Education  
FEATI University  
[gfabito@gmail.com](mailto:gfabito@gmail.com)

[5] **Ms. Mary Jane Caliza**, Team Lead  
AIP Project, ESS Manufacturing Company, Inc. (EMCI)

[6] **Ms. Joyce R. Ramos**, Head  
Broker Recruitment and Development

Paramount Group  
[joyce\\_ramos1@yahoo.com](mailto:joyce_ramos1@yahoo.com)