Luiz Gustavo Pimenta Martins

Physics Department - Massachusetts Institute of Technology (MIT)

77 Massachusetts Avenue 13-3025, Cambridge MA 02142

Phone: (617) 291-9172, Email: [lmartins@mit.edu](mailto:lmartins@mit.edu)

**FORMAL EDUCATION:**

**Massachusetts Institute of Technology (MIT), Cambridge, MA Jun. 2015 – Current**

***Ph.D. student in Physics* GPA: 4.6/5.0**

* Title: “Discovery of New 2D materials and from High-Pressure Experiments”.
* Advisor: Jing Kong.

Co-advisor: Riccardo Comin.

**Federal University of Minas Gerais (UFMG), Brazil Mar. 2013 – Mar. 2015**

***M.Sc. in Physics, Institute of Exact Sciences* GPA: 4.8/5.0**

* Title: “High-pressure Raman study of graphene: a spectroscopic evidence for the diamondol”.
* This work was developed in collaboration with the Federal University of Ceará (UFC), and the group of Professor Antonio Gomes de Souza Filho.
* Advisor: Luiz Gustavo de Oliveira Lopes Cançado.

**Federal University of Minas Gerais (UFMG), Brazil Aug. 2007 – Dec. 2012**

***B.Sc. in Chemical Engineering, School of Engineering* GPA: 4.0/5.0**

**PROFESSIONAL EXPERIENCE:**

**National Institute of Metrology, Quality and Technology (Inmetro), Brazil Feb. 2013 – Mar. 2013**

***Research Collaborator, Materials Metrology Division***

* Worked with experiments on Raman Spectroscopy of Ion Bombarded Bilayer Graphene in order to study defects.

**Federal University of Minas Gerais (UFMG), Brazil Sep. 2012 – Feb. 2013**

***Research Assistant, Institute of Exact Sciences - Department of Physics***

* Worked on the development of a model to explain the evolution of Raman features in nanographites.
* Advisor: Professor Luiz Gustavo de Oliveira Lopes Cançado

**Massachusetts Institute of Technology (MIT), Cambridge, MA Feb. 2012**

***Research Collaborator, Research Laboratory of Electronics (RLE)***

* Worked on the development of a device for a self-assembly coating experiment.
* Advisor: Associate Professor Jing Kong.

**Massachusetts Institute of Technology (MIT), Cambridge, MA Sep. 2011 – Feb. 2012**

***Visiting Student at the Nanomaterials and Electronics Group***

* Worked with Chemical Vapor Deposition CVD technique to grow graphene on copper and methods of transferring CVD grown graphene from copper to other substrates.
* Developed and studied a method of transferring CVD grown graphene onto flexible substrates.
* Worked on the fabrication of a Graphene Membrane for molecular gas separation.
* Advisor: Associate Professor Jing Kong.

**Federal University of Minas Gerais (UFMG), Brazil Sep. 2010 – Aug. 2011**

***Research Assistant, Institute of Exact Sciences:***

* Worked on obtaining graphene samples trough mechanical exfoliation process, it’s identification on optical microscope and its characterization by Raman Spectroscopy.
* Worked on the development of a model to explain the evolution of Raman features in nanographites.
* Advisor: Professor Luiz Gustavo de Oliveira Lopes Cançado

**Federal University of Minas Gerais (UFMG), Brazil Mar. 2009 – Dec. 2009**

***Teaching Assistant: Fundamentals of Electricity and Magnetism***

* Assisted 13 classes of 40 students (total 520 students) in understanding fundamental concepts and developing strategies for problem solving.

**PUBLICATIONS:**

**Luiz G. Pimenta Martins**, Alexandre R. Paschoal, Matheus J. S. Matos, Paulo T. C. Freire, Nadia F. Andrade, Acrísio L. Aguiar, Jing Kong, Bernardo R. A. Neves, Alan B. de Oliveira, Mário S.C. Mazzoni, Antonio G. Souza Filho, Luiz G. Cançado. *Nature communications* 8.1 (2017): 96.

**Martins, L.G.P.**; Song, Y.; Zeng, T.; Dresselhaus, M.S.; Kong, J.; Araujo, P.T. Direct transfer of graphene onto flexible substrates. *Proceedings of the National Academy of Sciences* 2013; 110(44):17762-17767.

Ribeiro-Soares, J.; Oliveros, M.E.; Garin, C.; David, M.V.; **Martins, L.G.P.**; Almeida, C.A.; Martins-Ferreira, E.H.; Takai, K.; Enoki, T.; Magalhães-Paniago, R.; Malachias, A.; Jorio, A.; Archanjo, B.S.; Achete, C.A.; Cançado, L.G. Structural analysis of polycrystalline graphene systems by Raman spectroscopy. *Carbon* 2015; 95:646-652.

**PARTICIPATION IN EVENTS:**

**International Congress:**

APS March Meeting 2019. Boston, Massachusetts, USA. March 4-8, 2019

Graphene Brazil 2010. Belo Horizonte, Minas Gerais, Brazil. 14th-17th Dec. 2010.

**Workshop:**

I Raman Spectroscopy School of the National Institute of Metrology, Quality and Technology. Duque de Caxias, Rio de Janeiro, Brazil. 22th-24th of July 2013.

**AWARDS**

10/2018 Scientist of the year 2017- Category Nanotechonolgy/student- Nanocell Institute, Brazil.

07/2016 SciBr Fellow 2016. The SciBr and Lemann Foundations selected eight Brazilian researches (graduate students, post docs, visiting professors) in STEM at the universities of Columbia, Harvard, MIT, Stanford, UCLA, UIUC and Yale, to receive an award and to become a SciBr Fellow. The researchers must be working on the cutting edge of their fields and be committed to social and scientific development in Brazil.

09/2015 Lourie Foundation Fellowship - Massachusetts Institute of Technology (MIT),USA.

12/2014 Fellowship for PhD studies through the Science Without Borders Program, National Council of Scientific and Technological Development (CNPq), Brazil.

03/2013 Graduate Scientific Research Fellowship (Master’s degree), National Council of Scientific and Technological Development (CNPq), Brazil.

09/2012 Undergraduate Scientific Research Fellowship, National Council of Scientific and Technological Development (CNPq), Brazil.

10/2010 Fórmula Santander program. This program, sponsored by Santander Bank, awarded scholarships to 100 talented Brazilian students to promote an exchange with partner universities worldwide.

09/2010 Undergraduate Scientific Research Fellowship, National Council of Scientific and Technological Development (CNPq), Brazil.

**TECHNIQUES:**

* Mechanical Exfoliation method.
* Chemical Vapor Deposition (CVD) synthesis.
* 2D Materials Transferring Techniques.
* Device Fabrication.
* Optics Instrumentation.
* Raman spectroscopy measurements.
* High-Pressure Raman

**ADDITIONAL INFORMATION**

**Extra-curricular activities:** Student Representative of the Physics Department at UFMG (May 2014 – Mar. 2015); Social chair of the Eastgate (MIT housing) Executive Committee (Mar. 2016-Current).

**Languages:** Portuguese: Native. English: Full professional proficiency. Spanish: Elementary proficiency.