



Michael E. Ramón Ph.D.

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PRACTICES Intellectual Property, Patents, Patent Prosecution and Counseling

Michael E. Ramón is a senior patent agent in the Intellectual Property Practice Group in the Austin office of Haynes Boone. Dr. Ramón's practice focuses on patent preparation and prosecution, with an emphasis on semiconductor processes and devices. He also has experience in a variety of other technical fields including financial technology, digital payment systems, mobile devices and mobile applications, software applications, business methods, encryption and authentication, telecommunications, microprocessor design, computer hardware, wireless networks, microelectromechanical systems, electric vehicles, medical devices, and optical systems.

Prior to joining the firm, Dr. Ramón completed his Ph.D. at the University of Texas at Austin, where his research focused on nanofabrication and metrology of graphene and III-V materials and devices. He also has six years of semiconductor industry experience at Freescale Semiconductor (formerly Motorola Semiconductor Products Sector), where he gained extensive experience with transistor and wafer-level reliability. Dr. Ramón has authored/co-authored 42 technical journal publications and conference presentations, is a co-inventor of eight U.S. patents, and has also refereed papers for various journals including *Journal of Vacuum Science and Technology B*, *ACS Nano*, *IEEE Transactions on Electron Devices*, and *Electron Device Letters*.

QUALIFICATIONS

EDUCATION

- B.S., Electrical Engineering, Princeton University, 1999
- M.S., Electrical Engineering, The University of Texas at Austin, 2005
- Ph.D., Electrical Engineering, The University of Texas at Austin, 2013

LANGUAGES

- Spanish

ADMISSIONS

- U.S. Patent and Trademark Office
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PUBLICATIONS AND SPEAKING ENGAGEMENTS

- "Fast and slow transient charging in various III-V field-effect transistors with atomic-layer-deposited-Al₂O₃ gate dielectric," M. E. Ramon, T. Akyol, D. Shahrjerdi, C. D. Young, and S. K. Banerjee, *Applied Physics Letters*, vol. 102, no. 2, January 16, 2013.
 - "Self-aligned graphene field-effect transistors with polyethyleneimine doped source/drain access regions," H. C. P. Movva, M. E. Ramon, C. M. Corbet, Sk. F. Chowdhury, G. Carpenter, E. Tutuc, and S. K. Banerjee, *Applied Physics Letters*, vol. 101, no. 18, November 2, 2012.
 - "3GHz Graphene Frequency Doubler on Quartz Operating Beyond the Transit Frequency," M. Ramon, K. N. Parrish, Sk. F. Chowdhury, C. W. Magnuson, H. C. P. Movva, R. S. Ruoff, S. K. Banerjee, and D. Akinwande, *IEEE Transactions on Nanotechnology*, vol. 11, no. 5, pp. 877-883, 2012.
 - "Graphene Frequency Doubler with Record 3GHz Bandwidth and the Maximum Conversion Gain Prospects," M. Ramon, K. N. Parrish, J. Lee, C. W. Magnuson, L. Tao, R. S. Ruoff, S. K. Banerjee, D. Akinwande, *IEEE MTT-S International Microwave Symposium*, June 2012.
 - "CMOS-Compatible Synthesis of Large-Area, High-Mobility Graphene by Chemical Vapor Deposition of Acetylene on Co Thin Films," M. E. Ramon, A. Gupta, C. Corbet, D. A. Ferrer, H. C. P. Movva, G. Carpenter, L. Colombo, G. Bourianoff, M. Doczy, D. Akinwande, E. Tutuc, and S. K. Banerjee, *ACS Nano*, vol. 5, no. 9, pp. 7198-7204, 2011.
 - "Graphene Field-Effect Transistors Using Large-Area Monolayer Graphene Grown by Chemical Vapor Deposition on Co Thin Films," M. E. Ramón, A. Gupta, C. Corbet, D. A. Ferrer, H.C.P. Movva, G. Carpenter, L. Colombo, G. Bourianoff, M. Doczy, D. Akinwande, E. Tutuc, S.K. Banerjee, *69th Device Research Conference*, June 2011.
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PROFESSIONAL AFFILIATIONS AND ENGAGEMENTS

- Tau Beta Pi
 - Institute of Electrical and Electronics Engineers
 - Princeton University admissions interviewer
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AWARDS AND RECOGNITIONS

- Doctoral Portfolio Program in Nanoscience and Nanotechnology (Certificate of Completion) - UT Austin Center for Nano- and Molecular Science and Technology
- Robert Noyce Memorial Fellowship, 2009-2011, 2012-2013
- Virginia & Ernest Cockrell, Jr. Graduate Fellowship, 2009-2013
- Best in Session Award in Emerging Materials and Devices Session at the Semiconductor Research Corporation TECHCON Conference, 2012
- National Science Foundation Integrative Graduate Education and Research Traineeship (IGERT) Fellowship, 2007-2009
- Engineering Scholar Award, UT College of Engineering