

Curriculum Vitae



Mircea Dragoman is a senior researcher I at the National Research Institute in Microtechnologies, since 1996. Presently, he is the scientific director of this leading research institute in Romania. He is also teaches an advanced course dedicated to micro and nontechnology at Univ. Politehnica Bucharest, Romania. He has realized the first carbon nanotube and graphene circuits in the world. He is working in the area of carbon nanotubes , graphene devices and atomically thin semiconductors applied in nanoelectronics, biology and energy harvesting. His work is highlighted in many websites such as iee spectrum, <http://nanotechweb.org>.. Mircea Dragoman is an Associate Editor of Electronics Letters, and Frontiers Neurosciences.

In the period 1992-1994 he was the recipient of the Humboldt Fellowship award and he has followed postdoctoral studies at Duisburg University, Germany.

He was invited professor at : CNR- Istituto di Electtronica dello Stato Solido-Roma (1996), Univ. Saint-Etienne –Franta (1997), Univ. Mannheim (1998-1999, 2001-2002), Univ. Frankfurt (2003), Univ. Darmstadt (2004); in the period 2005-2010 he was nminated directeur de recherché 1 at CNRS LAAS Toulouse . He had more than 40 invited papers in UE si 2 two univesity courses France (Nanoelectronics, 2005), Germany (Nonlinera Phenomena,1992).

He has published **more than 250** scientific papers. The papers are dedicated to the following areas : nanoelectronics, microwaves, MEMS, optoelectronics.

M.Dragoman has H=25 and 2358 citations (according to <http://scholar.google.com/citations?user=5ViV7YIAAAAJ&hl=en>)

He is co-author of the following **books**:

- D. Dragoman, M. Dragoman “*Advanced Optoelectronic Devices*”, **Springer**, 421 pages (1999)
- D. Dragoman, M. Dragoman, “*Optical Characterization of Solids*, **Springer**, 450 pages (2002),
- D.Dragoman, M.Dragoman “*Quantum Classical Analogies*”, **Springer**,400 pages (2004)
- M.Dragoman, D.Dragoman-*Nanoelectronics. Principles and Devices*, **Artech House**, Boston, USA (2006), *1st edition*,420 pages i,(2006).
- M.Dragoman, D.Dragoman-*Nanoelectronics. Principles and Devices*, **Artech House**, Boston, USA (2008), *2nd edition* , 500 pages,(2008).
- D.Dragoman and M.Dragoman Bionanoelectronics, , Springer, 2012
 - D.Dragoman and M.Dragoman, Sheng Wu Na Mi Dian Zi Xu (Bionanoelectronics, Chinesse Edition, Science Press, 2015).
- M.Dragoman and D,Dragoman, 2D materials nanoelectronics, Springer, 2016 (to be published).

In 2002 he was nominalized for the Descartes Prize of uE together other colleagues from IMT and other 6 research teams from abroad.he has received the Romanian Academy Prize *Gh. Cartianu* in 1999, for the book *Advanced Optoelectronic Devices*, Springer.

Recent publications

ISI papers:

1. A. Cismaru, M.Dragoman, A.Radoi, A.Dinescu, and D.Dragoman, The microwave sensing of DNA hybridization using carbon nanotubes decorated with gold nanoislands, *J. Appl. Phys.* 111, 076106 (2012)
2. G. Vicenzi, G.Deligeorgis, F. Cocetti, M.Dragoman, L. Pierantoni, D. Mencarelli, R. Plana , Extending ballistic graphene FET lumped element models to diffusive devices, *Solid –State Electronics* 76 , pp.8-12 (2012).
3. M.Dragoman, G.Konstantinidis, K. Tsagaraki, T. Kostopoulos, D.Dragoman and D. Neculoiu, Graphene-like metal-on-silicon field-effect transistor, *Nanotechnology* 23, 305201 (2012).
4. A. Radoi, M.Dragoman, A.Cismaru, G.Konstantinidis, and D.Dragoman, Self-powered microwave devices based on graphene ink decorated with gold nanoislands, *J. Appl.Phys.* 112, 064327 (2012).
5. M.Dragoman, D. Neculoiu, A.Cismaru, G.Deligeorgis, G. Konstantinidis, and D.Dragoman, Graphene nanoradio: Detecting radiowaves with a single atom sheet, *Appl. Phys. Lett.* 109, 033109 (2012)
6. M.Dragoman, G. Deligeorgis, A.Muller, A.Cimaru, D.Neculoiu, G. Konstantinidis, D.Dragoman, A.Dinescu and F. Comanescu, Millimeter wave Schottky diode on graphene monolayer via symmetric metal contacts, *J. Appl. Phys.* 112, 084302 (2012).
7. Daniela Dragoman¹ and Mircea Dragoman, Geometrically induced rectification in two-dimensional ballistic nanodevices, *J. Phys. D: Appl. Phys.* **46** (2013) 055306 (6pp).
8. Mircea Dragoman, Alina Cismaru, Adrian Dinescu, Daniela Dragoman, G. Stavrinidis, and G. Konstantinidis, Enhancement of higher harmonics in graphene-based coupled coplanar line microwave multipliers, *Journal of Applied Physics* **114**, 154304 (2013);
9. Martino Aldrigo, Mircea Dragoman, Alessandra Costanzo, and Daniela Dragoman, Graphene as a high impedance surface for ultra-wideband electromagnetic waves, *Journal of Applied Physics* 114, 184308 (2013);
10. M.Dragoman, Nanoelectronics on a single atom sheet, *Romanian Reports in Physics*, Vol. 65, No. 3, P. 792–804, 2013;
11. Mircea Dragoman, Martino Aldrigo, Adrian Dinescu, Daniela Dragoman, and Alessandra Costanzo, Towards a terahertz direct receiver based on graphene up to 10 THz, *Journal Applied Physics* 115, 044307 (2014).
12. Mircea Dragoman, Detection of electromagnetic waves with a single carbon atom sheet, *Proc. Romanian Academy, series A . vol.15*, pp.208-215 (2014).
13. Martino Aldrigo, Mircea Dragoman, and Daniela Dragoman Smart antennas based on graphene, *JOURNAL OF APPLIED PHYSICS* 116, 114302 (2014).
14. Daniela Dragoman and Mircea Dragoman, Enhanced architectures for room-temperature reversible logic gates in graphene, *Applied Physics Letters* 105, 113109 (2014).
15. Mircea Dragoman, Adrian Dinescu and Daniela Dragoman, Negative differential resistance in graphene based ballistic field-effect transistor with oblique top gate, *Nanotechnology* **25** 415201 (2014).

16. M. Dragoman, D. Neculoiu, Al.-C. Bunea, G. Deligeorgis, M. Aldrigo, D. Vasilache, A. Dinescu, G. Konstantinidis, D. Mencarelli, L. Pierantoni, and M. Modreanu, A tunable microwave slot antenna based on graphene, *Appl. Phys. Lett.* 106, 153101 (2015).
17. M. Dragoman, A. Cismaru, M. Aldrigo, A. Radoi, and D. Dragoman, Switching microwaves via semiconductor-isolator reversible transition in a thin-film of MoS₂, *J. Appl. Phys.* 118, 045710 (2015).
18. D. Vasilache¹, A. Cismaru, M. Dragoman, I. Stavarache , C. Palade, A.-M. Lepadatu, and M. Ciurea, Non-volatile memory devices based on Ge nanocrystals, *Phys. Status Solidi A*, 1–5 / DOI 10.1002/pssa.201532376 (2015).
19. D.Dragoman and M.Dragoman, Graphene-based room-temperature implementation of a modified Deutsch–Jozsa quantum algorithm, *Nanotechnology* (2015).
20. M.Dragoman,A. Cismaru, M. Aldrigo, A. Radoi, A. Dinescu,and D. Dragoman, MoS₂ thin films as electrically tunable materials for microwave applications, *Appl. Phys, Lett* 107, 243109 (2015)