

# Curriculum Vitae Marinko Jablan

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## Education and research experience

**PhD in Physics**, University of Zagreb, Croatia (2012)

**Electrodynamic properties of graphene and their technological applications**

Hrvoje Buljan, Marin Soljacic (supervisors)

Areas of expertise: **graphene, plasmonics, optics, near-field thermophotovoltaics**

Research visit, **Massachusetts Institute of Technology**, USA, (2008 and 2011)

**Thermophotovoltaics and optomechanics in graphene** (2011, 6 months)

**Plasmonics in graphene** (2008, 6 months)

Marin Soljacic (host)

**BSc in Physics**, University of Zagreb, Croatia (2006)

**Incoherent modulation instability in nonlinear photonic lattice**

Hrvoje Buljan (supervisor)

## Publications

- M. Jablan, M. Soljačić, H. Buljan, *Screening effect on the optical absorption of graphene*, in preparation
- M. Jablan, M. Soljačić, H. Buljan, *Plasmons in Graphene: Fundamental Properties and Potential Applications*, Invited paper in Proceedings of the IEEE 101, 1689 (2013)
- H. Buljan, M. Jablan, M. Soljačić, *Graphene plasmonics: Damping of plasmons in graphene*, Nature Photonics 7, 346 (2013)
- O. Ilic, M. Jablan, J.D. Joannopoulos, I. Celanovic, H. Buljan, M. Soljačić, *Near-field thermal radiation transfer controlled by plasmons in graphene*, Phys. Rev. B 85, 155422 (2012)
- O. Ilic, M. Jablan, J.D. Joannopoulos, I. Celanovic, M. Soljačić, *Overcoming the black body limit in plasmonic and graphene near-field thermophotovoltaic systems*, Optics Express 20, A366 (2012)
- M. Jablan, M. Soljačić, H. Buljan, *Unconventional plasmon-phonon coupling in graphene*, Phys. Rev. B 83, 161409(R) (2011)
- M. Jablan, H. Buljan, M. Soljačić, *Transverse electric plasmons in bilayer graphene*, Optics Express 19, 11236 (2011)

- M. Jablan, H. Buljan, M. Soljačić, *Plasmonics in graphene at infrared frequencies*, Phys. Rev. B 80, 245435 (2009), also appeared as an Invited Paper in Virtual Journal of Nanoscale Science & Technology, January 2010.
- H. Buljan, K. Lelas, R. Pezer, M. Jablan, *Single-particle density matrix and the momentum distribution of dark “solitons” in a Tonks-Girardeau gas*, Phys. Rev. A 76, 043609 (2007)
- M. Jablan, H. Buljan, O. Manela, G. Bartal, M. Segev, *Incoherent modulation instability in a nonlinear photonic lattice*, Optics Express 15, 4623 (2007)

## Awards

- 2008 *Science Award* for the best student paper, prestigious award given to only 3 students in Croatia per year
- *Top scholarship for Top students* 2006, prestigious scholarship awarded to only 40 students in Croatia per year
- Mention of the Faculty Council for extraordinary success during study
- International Mathematical Olympiad 1999, 2000, 2001 (Bronze medal)
- Mediterranean Mathematical Competition 2000, 2001 (Silver medal)
- 1<sup>st</sup> prize: National Competition in Math (1998, 1999, 2001), Physics (1999, 2001), and Chemistry (1997)

## Research grant

- Principal Investigator of a research project: *Exploiting opto-mechanical properties of graphene for novel nano-technologies*, funded by Unity through Knowledge Fund

## Professional activities

- Referee for: *Nature photonics*, *Physical Review Letters*, *Physical Review B*, *Optics Letters*, *Physics Letters A*

## Teaching experience

- Teaching assistant for courses: *Statistical Mechanics*, *Quantum Mechanics*, *Hydrodynamics*, and *Electromagnetic waves and optics*

## Hobbies

- Judo (black belt), Tango Argentino