Election au Conseil scientifique du CNRS - collège B2

Muamer Kadic

Section 8:
Micro- et nanotechnologies, micro- et nanosystèmes, photonique, électronique, électromagnétisme, énergie électrique
Collège B2

25000 Besançon, France
☎ +33 (0)7.81.43.84.96
Citizen: French, born in 1981

Work Experience

2016-> **Associate Professor, Universite de Bourgogne Franche-Comté**, *FEMTO-ST*, Besancon, France.

2012-2015 **Postdoctoral research, Applied Physics**, *KIT*, Karlsruhe, Germany.

2008-2011 **PHD, Institut Fresnel**, *University of Marseille*, Marseille, France.
Research: Electromagnetism, Plasmonics, Scattering Matrix Calculations, Finite Elements, Cloaking, Lensing, Metamaterial Design.

2006-2008 **Researcher**, *Trinity College Dublin*, Dublin, Ireland.
General LASER optics and characterization of metallic nanostructures and quantum dots.

GrenobleFranceElectromagnetic simulation and modeling of the evaluation of interconnect performances.

Education

2008-2011 **PhD in Physics**, *Institut Fresnel and Aix-Marseille University*, Marseille, France.
"Metamaterials for surface plasmons"

2001-2006 **Engineering degree**, *National Institute of Applied Sciences of Rennes (INSA)*, Rennes, France.
Materials Science, Nanotechnology

Website

https://scholar.google.com/citations?user=opodZE4AAAAJhl=en

https://members.femto-st.fr/muamer-kadic/

2 Plenary, 5 Keynote, 15 Invited and 25 Oral contributions in International Conferences

112 Publications in International Journals (selection of 20 publications)

1. Tiemo Bückmann, Nicolas Stenger, Muamer Kadic, Johannes Kaschke, Andreas Frölich, Tobias Kennerknecht, Christoph Eberl, Michael Thiel, and Martin Wegener. Tailored 3d mechanical metamaterials made by dip-in direct-laser-writing optical lithography. *Adv. Mater.*, 24:2710–2714, 2012
2. Robert Schittny, Muamer Kadic, Sebastien Guenneau, and Martin Wegener. Experiments on transformation thermodynamics: molding the flow of heat. *Phys. Rev. Lett.*, 110:195901, 2013
3. Muamer Kadic, Tiemo Bückmann, Robert Schittny, and Martin Wegener. Metamaterials beyond electromagnetism. *Rep. Prog. Phys.*, 76:126501, 2013
4. Robert Schittny, Muamer Kadic, Tiemo Bückmann, and Martin Wegener. Invisibility cloaking in a diffusive light scattering medium. *Science*, 345:427–429, 2014

5. T Bückmann, M Thiel, M Kadic, R Schittny, and M Wegener. An elasto-mechanical unfeelability cloak made of pentamode metamaterials. *Nat. Commun.*, 5:1–6, 2014
6. Muamer Kadic, Robert Schittny, Tiemo Bückmann, Christian Kern, and Martin Wegener. Hall-effect sign-inversion in a realizable 3d metamaterial. *Phys. Rev. X*, 5:021030, 2015
7. Tiemo Bückmann, Muamer Kadic, Robert Schittny, and Martin Wegener. Mechanical cloak design by direct lattice transformation. *Proc. Natl. Acad. Sci. U.S.A.*, 112:4930–4934, 2015
8. Tiemo Bückmann Christian Kern Martin Wegener Muamer Kadic, Robert Schittny. Hall-effect sign inversion in a realizable 3d metamaterial. *Phys. Rev. X*, 5:021030
9. Tobias Frenzel, Claudio Findeisen, Muamer Kadic, Peter Gumbsch, and Martin Wegener. Tailored buckling microlattices as reusable light-weight shock absorbers. *Adv. Mater.*, 28:5865–5870, 2016
10. Christian Kern, Muamer Kadic, and Martin Wegener. Experimental evidence for sign reversal of the Hall coefficient in three-dimensional metamaterials. *Phys. Rev. Lett.*, 118:016601, 2017
11. Muamer Kadic, Tiemo Buckmann, Tobias Frenzel, Claudio Findeisen, Christian Kern, Robert Schittny, Peter Gumbsch, and Martin Wegener. 3d microstructured metamaterials. *Materials and Devices Beyond! CMOS*, page 21
12. Tobias Frenzel, Muamer Kadic, and Martin Wegener. Three-dimensional mechanical metamaterials with a twist. *Science*, 358(6366):1072–1074, 2017
13. Christian Kern, Muamer Kadic, and Martin Wegener. Experimental evidence for sign reversal of the Hall coefficient in three-dimensional metamaterials [reply to oswald's comment]. 2018
14. Ivan Fernandez-Corbaton, Carsten Rockstuhl, Patrick Ziemke, Peter Gumbsch, Almut Albiez, Ruth Schwaiger, Tobias Frenzel, Muamer Kadic, and Martin Wegener. New twists of 3d chiral metamaterials. *Advanced Materials*, 31(26):1807742, 2019
15. Tobias Frenzel, Julian Köpfler, Erik Jung, Muamer Kadic, and Martin Wegener. Ultrasound experiments on acoustical activity in chiral mechanical metamaterials. *Nature communications*, 10(1):1–6, 2019
16. Johnny Moughames, Xavier Porte, Michael Thiel, Gwenn Ulliac, Laurent Larger, Maxime Jacquot, Muamer Kadic, and Daniel Brunner. Three-dimensional waveguide interconnects for scalable integration of photonic neural networks. *Optica*, 7(6):640–646, 2020
17. KK Dudek, JA Iglesias Martínez, G Ulliac, and M Kadic. Micro-scale auxetic hierarchical mechanical metamaterials for shape morphing. *Advanced Materials*, page 2110115, 2022
18. Yi Chen, Mahmoud AA Abouelatta, Ke Wang, Muamer Kadic, and Martin Wegener. Nonlocal cable-network metamaterials. *Advanced Materials*, page 2209988, 2023
19. MF Groß, JLG Schneider, Y Wei, Y Chen, S Kalt, M Kadic, X Liu, G Hu, and M Wegener. Tetramode metamaterials as phonon polarizers. *Advanced Materials*, page 2211801, 2023
20. Krzysztof K Dudek, JA Iglesias Martínez, Gwenn Ulliac, Laurent Hirsinger, Lianchao Wang, Vincent Laude, Muamer Kadic, and KK Dudek. Micro-scale mechanical metamaterial with a controllable transition in the poisson's ratio and band gap formation. *Advanced Materials*, page 2210993, 2023