A terahertz view on magnetization dynamics

Awari, Nilesh

List of publications

Publications described in this thesis

1. "Magnetic field dependence of antiferromagnetic resonance in NiO",
   Zhe Wang, S. Kovalev, N. Awari, Min Chen, S. Germanskiy, B. Green, J.-C. Deinert, T. Kampfrath, J. Milano, and M. Gensch
   Applied Physics Letters, **112**, 25 (2018)

2. "Narrow-band tunable terahertz emission from ferrimagnetic Mn3-xGa thin films",
   N. Awari, S. Kovalev, C. Fowley, K. Rode, R. A. Gallardo, Y.-C. Lau, D. Betto, N. Thiyagarajah, B. Green, O. Yildirim, J. Lindner, J. Fassbender, J. M. D. Coey, A. M. Deac, and M. Gensch
   Applied Physics Letters, **109**, 3 (2016)

3. "Speed limits of ultrafast demagnetization",
   N. Awari, S. Kovalev, D. Polley, K. Neeraj, M. Hudl, A. Semisalova, B. Green, P. Arekapudi, S.-H. Yang, M. Samant, S.S.P. Parkin, O. Hellwig, M. Gensch, and S. Bonetti
   In preparation

4. "Continuously Tunable Spintronic Emission in the sub-THz Range",
   N. Awari, A. Titova, S. Kovalev, C. Fowley, J. Lindner, M. Gensch, A. Deac
   In preparation

Other publication(s) during Ph.D. work

5. "Extremely efficient terahertz high-harmonic generation in graphene by hot Dirac fermions",
   Hassan A. Hafez, Sergey Kovalev, Jan-Christoph Deinert, Zoltán Mics, Bertram

Green, Nilesh Awari, Min Chen, Semyon Germanskiy, Ulf Lehnert, Jochen Teichert, Zhe Wang, Klaas-Jan Tielrooij, Zhaoyang Liu, Zongping Chen, Akimitsu Narita, Klaus Müllen, Mischa Bonn, Michael Gensch and Dmitry Turchinovich
Nature , (2018).

6. "On-chip THz spectrometer for bunch compression fingerprinting at fourth-generation light sources",
M. Laabs, N. Neumann, B. Green, N. Awari, J. Deinert, S. Kovalev, D. Plettemeier, M. Gensch
Journal of Synchrotron Radiation **25**, 1509-1513 (2018).

7. "Towards femtosecond-level intrinsic laser synchronization at fourth generation light sources",
M. Chen, S. Kovalev, N. Awari, Z. Wang, S. Germanskiy, B. Green, J-C Deinert, M. Gensch
Optics letters **43** (9), 2213-2216 (2018).

8. "Selective THz control of magnetic order: new opportunities from superradiant undulator sources",
S. Kovalev, Zhe Wang, J-C Deinert, N. Awari, M. Chen, B. Green, S. Germanskiy, TVAG de Oliveira, J.S. Lee, A. Deac, Dmitry Turchinovich, N. Stojanovic, S. Eisebitt, I. Radu, Stefano Bonetti, Tobias Kampfrath, M. Gensch
Journal of Physics D: Applied Physics **51**, 11 (2018).

9. "High-field high-repetition-rate sources for the coherent THz control of matter",
B. Green, S. Kovalev, V. Asgekar, G. Geloni, U. Lehnert, T. Golz, M. Kuntzsch, C. Bauer, J. Hauser, J. Voigtlaender, B. Wustmann, I. Koesterke, M. Schwarz, M. Freitag, A. Arnold, J. Teichert, M. Justus, W. Seidel, C. Ilgner, N. Awari, Daniele Nicoletti, Stefan Kaiser, Yannis Laplace, Srivats Rajasekaran, Lijian Zhang, S. Winnerl, H. Schneider, G. Schay, I. Lorincz, A.A. Rauscher, I. Radu, Sebastian Mährlein, T.H. Kim, J.S. Lee, Tobias Kampfrath, S. Wall, J. Heberle, A. Malnasi-Csizmadia, A. Steiger, A.S. Müller, M. Helm, U. Schramm, T. Cowan, P. Michel, Andrea Cavalleri, A.S. Fisher, N. Stojanovic, M. Gensch
Scientific reports **6**, 22256 (2016).

Publication(s) prior to Ph.D. work

10. "Multilayer broadband absorbing structures for terahertz region",
A. Dubey, A. Jain, C.G. Jayalakshmi, T.C. Shami, N. Awari, S.S. Prabhu
Microwave and Optical Technology Letters **55** (2), 393-395 (2013).

11. "Charge-density wave condensate in charge-ordered manganites: impact of ferromagnetic order and spin-glass disorder",
R. Rana, N. Awari, P. Pandey, A. Singh, S.S. Prabhu, D.S. Rana
Journal of Physics: Condensed Matter **25** (10), 106004 (2013).

12. "Charge density waves condensate as measure of charge order and disorder in $Eu_{1-x}Sr_xMnO_3$ (x=0.50, 0.58) manganites",
P. Pandey, N. Awari, R. Rana, A. Singh, S.S. Prabhu, D.S. Rana
Applied Physics Letters **100** (6), 062408 (2012).