



Contribution ID: 258

Type: **oral**

## **Background-Free Electric Dipole based Chiral-HHG by Symmetry Breaking Spectroscopy: Theory and Experiment**

*Monday 1 July 2019 09:30 (15 minutes)*

We propose and demonstrate experimentally an ultrafast chirality spectroscopy technique based on non-collinear harmonic generation, which relies only on electric-dipole interactions. The scheme is based on symmetry breaking, i.e. the chiral signal resides in harmonics that are forbidden when the medium is achiral/racemic, leading to a background-free signal. Moreover, by controlling the pump's symmetry properties the technique also yields a huge enantio-sensitive response –we experimentally measure 163% R/S selectivity.

**Authors:** Mr NEUFELD, Ofer (Technion); Mr LERNER, Gavriel (Technion); Mr BORDO, Eliyahu (Technion); Mr LAVEE, Dan (Tel Aviv University); Prof. CIREASA, Raluca (CNRS, Université Paris Sud); Prof. FLEISCHER, Avner (Tel Aviv University); AYUSO, David (Max Born Institute); Prof. DECLEVA, Piero (Università di Trieste); Prof. IVANOV, Mikhail (Max Born Institute); Prof. SMIRNOVA, Olga (Max Born Institute); Prof. COHEN, Oren (Technion)

**Presenter:** Mr NEUFELD, Ofer (Technion)

**Session Classification:** Strong field physics in topological and chiral materials