Contribution ID: **248** Type: **Poster**

【191】Spin waves in direct-write 3D nano-architectures

Tuesday 31 August 2021 19:20 (1 minute)

Extension of nanostructures into the third dimension is now a major approach in magnetism, superconductivity, and spintronics due to recent advancements in synthesis techniques and discovery of rich novel phenomenology induced by geometry, curvature, and topology effects. Herein, certain shape and curvature induced effects in ferromagnetic 3D nanostructures are presented, with focus on Co-Fe nanovolcanos and magnonic conduits fabricated by focused electron beam-induced deposition and characterised by microwave spectroscopy in conjunction with micromagnetic simulations. The broad tunability of magnon frequency spectra in direct-write Co-Fe nanostructures makes them good candidates as prospective platforms for 3D nanomagnonics and inverse-design magnonic devices.

Primary author: LAMB-CAMARENA, Sebastian (University of Vienna)

Co-authors: DOBROVOLSKIY, Oleksandr (University of Vienna); VOVK, Nikolay (University of Porto); BONDARENKO, Artem (University of Porto); BUNYAYEV, Sergiy (University of Porto); ZENBAA, Noura (University of Vienna); SACHSER, Roland (Physics Institute, Goethe University Frankfurt am Main, Germany); BARTH, Sven (Goethe University); GUSLIENKO, Konstantin (University of the Basque Country); CHUMAK, Andrii (University of Vienna); HUTH, Michael (Goethe University); KAKAZEI, Gleb (University of Porto)

Presenter: LAMB-CAMARENA, Sebastian (University of Vienna)

Session Classification: Poster Session

Track Classification: Condensed Matter Physics (KOND)