



Physics Colloquium

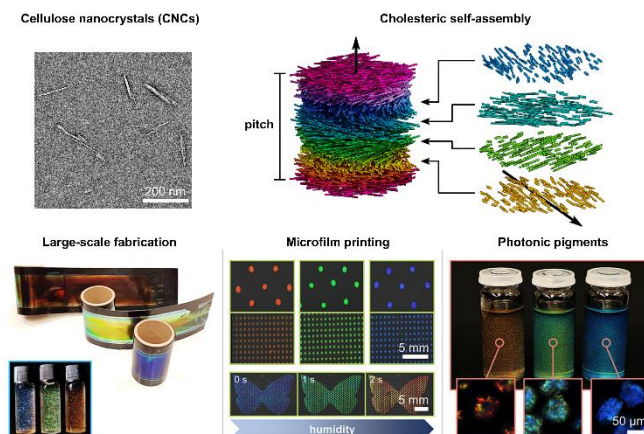
Tuesday, 7 January 2025 at 16:30

Prof. Dr. Silvia Vignolini

Max Plank for Colloids and Interfaces MPG, Potsdam DE

Colours with a twist: bio-inspired self-assembled chiral architecture

Chirality transfer across length scales is an intriguing and universal phenomenon. Both in nature and for application complex architectures composed of bio-based chiral building blocks are responsible for unique optical responses from colorations to extremely high g-factors. When it comes to working with naturally derived chiral building blocks, however, the challenge lies in understanding how the properties of individual building blocks relate to the emergent features of large-scale architectures and structures. Our research addresses this gap by investigating the origins of mesophase chirality in bio-derived particles such as cellulose and chitin nanocrystal suspensions. Through a combination of quantitative morphological analysis of individual nanoparticles, final architecture, and their assemblies we showcase the functionality of such chiral materials in the context of optical materials including plasmonic ones, also providing examples of how such materials can be produced at scale.



Host: Prof. Dr. Frank Cichos

Venue: Universität Leipzig, Faculty of Physics and Earth Sciences
04103 Leipzig, Linnéstraße 5, Small Lecture Hall

Everyone is welcome to a reception with coffee, drinks and cookies in the Aula following the talk.

For an up-to-date semester program, sign-up for the physics colloquium mailing list, and subscription to the digital calendars in CalDAV format, head to the colloquiums web page <https://www.physes.uni-leipzig.de/fakultaet/veranstaltungen>.

