



**Highlighting research results from the Faculty of Mathematics and Physics at the University of Ljubljana, Slovenia, in collaboration with Dr Noel Clark from the Physics Department at the University of Colorado, USA.**

**Title: Elementary building blocks of nematic disclination networks in densely packed 3D colloidal lattices**

A nematic, confined to the interstitial space of a three-dimensional close packed colloidal crystal, entangles an elaborate network of disclination lines around the spherical inclusions. Through the use of topological theory of defects and symmetry-based arguments, we constructed a geometric model of building blocks that enumerates possible disclination networks. We verified our model with numerical simulations.

**As featured in:**



See Simon Čopar,  
*Soft Matter*, 2013, **9**, 8203.

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