

Applications of topological colloidal magnetic transport

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Paramagnetic colloidal particles are placed above magnetic patterned periodic and non-periodic surfaces and exposed to a homogeneous time dependent external magnetic field loop. The particles respond to the loop by a topologically nontrivial transport above the pattern. The magnetic loops are a sort of language enabling us to globally talk to the paramagnetic colloidal particles but simultaneously provoking individual predesigned response in their transport. The talk will show a few examples of useful sentences of this topological language.