Abstract Submitted
for the DFD15 Meeting of
The American Physical Society

Flock on a chip DENIS BARTOLO, NICOLAS DESREUMAUX, ENS - Lyon — We will show how to motorize colloidal particles capable of sensing the orientation of their neighbors and how to handle them in microfluidic chips. These populations of colloidal rollers display non-equilibrium transitions toward swarming or swirling motion depending on the system geometry . After characterizing these emergent patterns we will quantitatively describe them by means of an hydrodynamic theory of polar active liquids.

Denis Bartolo
ENS - Lyon

Date submitted: 31 Jul 2015 Electronic form version 1.4