Abstract Submitted for the MAR16 Meeting of The American Physical Society

Shape mismatch in self assembly leads to fiber-like aggregates¹ MARTIN LENZ, CNRS - Orsay, EFRAIM EFRATI, Weizmann Institute of Science, THOMAS A. WITTEN, University of Chicago — Aggregating proteins tend to form fibers, often for the worse - think of Alzheimer's disease. Could this propensity to form fibers be a generic physical property of irregular aggregating objects, rather than something specific to protein chemistry? We investigate the aggregation of simple ill-fitting, deformable objects and find that geometrical frustration can lead to self-assembly into slender aggregates.

¹ML acknowledges support from Universit Paris-Sud and CNRS, the University of Chicago FACCTS program, Marie Curie Integration Grant PCIG12-GA-2012-334053 and Investissements d'Avenir LabEx PALM (ANR-10-LABX-0039-PALM).

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Date submitted: 06 Nov 2015 Electronic form version 1.4