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Self-assembly with and of patchy colloids: prediction and exploration ERIK EDLUND, OSKAR LINDGREN, MARTIN NILSSON JACOBI, Chalmers University of Technology — Patchy colloids serve as one of the key models for self-assembly of anisotropic building blocks. Interestingly, it is possible to use self-assembly to create the patchy colloids themselves [1]. We present recently developed theory for predicting pattern formation on colloids [2] and suggests a systematization of such self-assembled patchy colloids. This allows us to perform systematic computational study of patchy particles and their self-assembly into complex structures, results from which we present here. Our results highlight the importance of interplay between theory and computational exploration. [1] A. M. Jackson, J. W. Myerson, and F. Stellacci, Nat. Mater. 3(5), 330 (2004) [2] E. Edlund, O. Lindgren., and M. Nilsson Jacobi, (2013) http://arxiv.org/abs/1310.3858

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