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Characterizing the local environment for self-assembly WENBO SHEN, GREG VAN ANDERS, ERIC HARPER, MATTHEW P. SPELLINGS, MICHAEL ENGEL, SHARON C. GLOTZER, Univ of Michigan - Ann Arbor — Recent advances in synthesis techniques of nano- and micrometer sized colloids have produced a diversity of enthalpically and entropically patchy particles. Relating particle patchiness and structure is necessary for the successful self-assembly of these building blocks. We investigate the relationship between patchiness and local structure by quantifying variations in the relative alignment of particle pairs. Using these methods we compare the efficiency of different types of patchiness for inducing ordering and apply them to self-complementary and actively driven shapes.

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