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Pac-Man: Lock and Key Colloid Particles¹ ASHLEY TAYLOR, LEI ZHANG, Winston Salem State University, STEFANO SACANNA, DAVID PINE, New York University, NEW YORK UNIVERSITY COLLABORATION² — The lock and key models using Pac-man particles is an alternative identification mechanism for directing the assembly of combined structures. The system was guided by Fischer's lock- and key principle which consisted of colloidal spheres as keys and monodisperse colloidal particles with a spherical cavity as locks that bind. What makes this so specific is the fact that the assembly is controlled by how closely the size of a spherical colloidal key particle matches the radius of the spherical cavity of the lock particle. Viscosity measurements were also looked at because nano-particles are known to change the resistance of the fluid.

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