

SOFT AND STICKY COLLOIDS; RASPBERRIES, MUFFINS AND CAULIFLOWERS

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The architecture and ultrastructure of biological structures are amazingly intricate but far too complicated to be assembled directly *via* the organisms' DNA blueprint. However, the appearance and thus degree of control directing the assembly is genus specific. This suggests that a DNA-specific "templating" mechanism is present. We show that identical ultrastructure may be reproduced using "simple" synthetic colloids confirming that the assembly mechanism is determined by the colloidal interactions between the building blocks. These interactions are due to, and mediated by, the chemical nature of the building block components. In this way, the DNA determines the chemical structure of the building blocks and *inter alia* the templating process and ultrastructure.