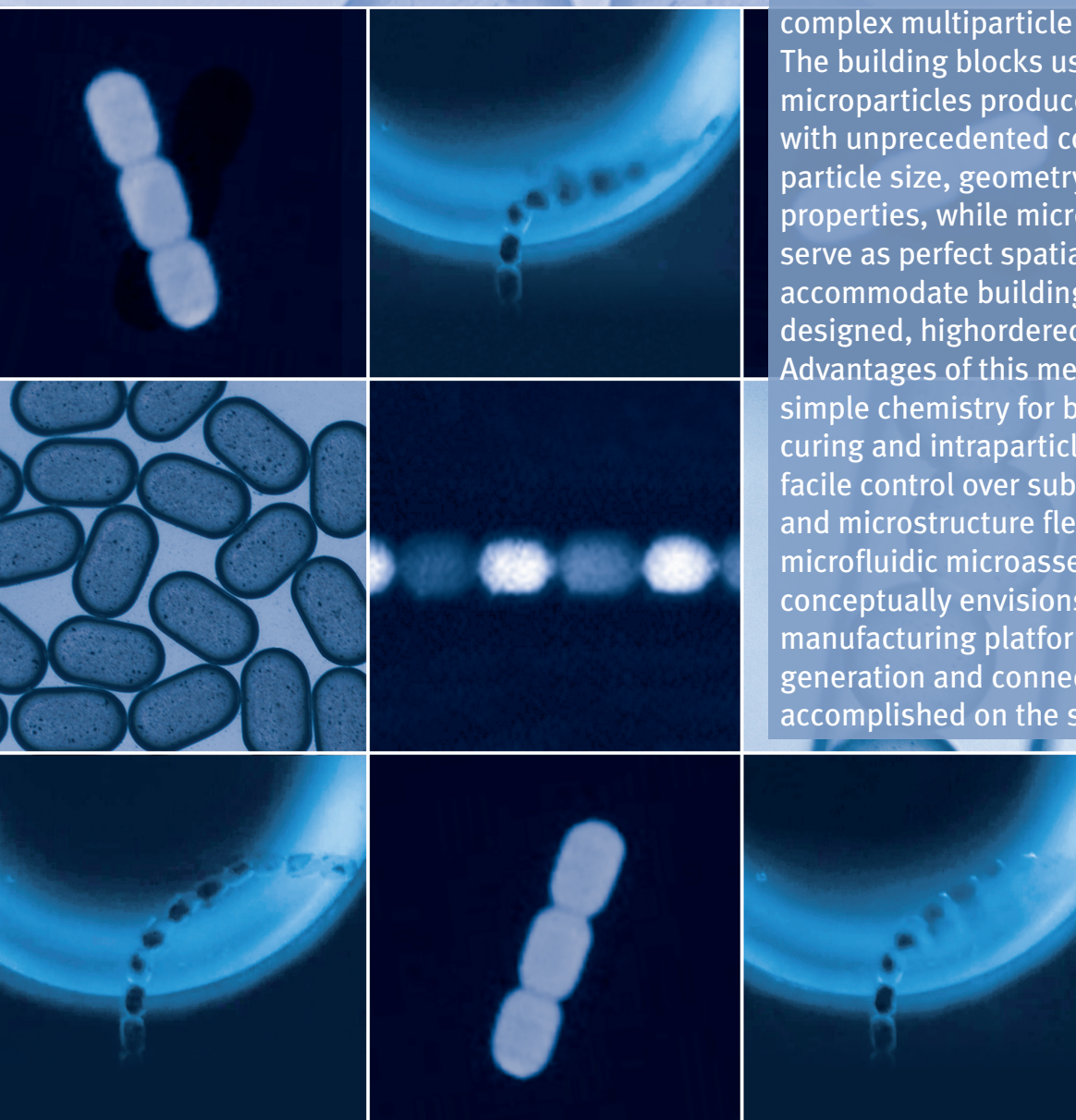


NANO MICRO

small

Microfluidics

The image illustrates an in-situ dynamic microassembly on an integrated microfluidic platform that both produces microsized building blocks and also assembles them into complex multiparticle configurations. The building blocks used originate from microparticles produced microfluidically, with unprecedented control over particle size, geometry, and functional properties, while microfluidic channels serve as perfect spatial templates to accommodate building blocks into designed, highordered patterns. Advantages of this method include the simple chemistry for both interparticle curing and intraparticle linkage, and the facile control over subunit arrangement and microstructure flexibility. This microfluidic microassembly method conceptually envisions an integrated manufacturing platform where subunit generation and connection are accomplished on the same chip.



17/2011

 WILEY-VCH

A New Approach to In-Situ “Micromanufacturing”: Microfluidic Fabrication of Magnetic and Fluorescent Chains Using Chitosan Microparticles as Building Blocks

D. L. DeVoe, S. R. Raghavan, et al.