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Control over the number, size, and type of inner drops inside a double emulsion LAURA ADAMS, YUANJIN ZHAO, ANDERSON SHUM, DAVID WEITZ, Harvard University — The formation of monodisperse double emulsions, drops inside of drops, has revealed a rich range of configurations not possible without the precise control of microfluidics. Yet-to-date, development of double emulsions with a controlled number of two different inner drops has not emerged. Here we demonstrate exquisite control over the number, size and type of inner drops encapsulated inside a double emulsion. These are fabricated using glass capillary devices implemented with a dual bore injection tube. We will show our latest results and discuss the scientific and technological opportunities made possible by these stable binary configurations.

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