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HYPERCROSSLINKED POLYMER MICROSPHERES

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Spherical, ultra-high specific surface area monodisperse polymer microspheres with diameters in the low micrometer size range have been prepared *via* the hypercrosslinking of swellable, precursor particles. The precursor particles were synthesised using both non-aqueous dispersion (NAD) polymerisation and precipitation polymerisation (PP) methodologies [*Adv. Mater.* (2008) in press]. Specific surface areas in excess of $1,600 \text{ m}^2 \text{ g}^{-1}$ were recorded.

The microspheres are able to sorb significant levels of both hydrocarbon solvents and water, acting in effect as *amphipathic micro-sponges*. Exciting possibilities for exploitation of the particles in chromatography, diagnostics, sensors, delivery vehicles and catalysis are suggested [*J. Chromatogr. A* (2008) in press].