

TABLE 19.1 Some Prominent Synthesis Route for MSNs

Structure Directing Agent (SDA)	Precursor	MSN Size (nm)	Pore Size (nm)	pH	Particle Size Control Technique	Authors
CTAB	TEOS	15	3	Alkaline	Dilution + pH quenching	Mann et al.
CTAC	TEOS	20–50	3	Alkaline	Quenching by P123	Suzuki et al.
CTAB and Dodecylamine	TEOS	65–740	3	Alkaline	Dilute conditions, water + EtOH co-solvent	Nooney et al.
P123	Waterglass	50–300	5–7	Acidic	Addition of salts, varying amount of water	Berggren and Palmqvist
C_n TAC ($n=14, 16, \text{ and } 18$)	TMOS	150–870	2–2.3	Alkaline	Methanol to water ratio	Yano and Fukushima
C_n TAB ($n=14, 16, \text{ and } 18$) C_n TAC ($n=10, 16$)	TEOS	70–150	1.6–3	Close to neutral	Combined acid-base and liquid evaporation	Kapoor et al.