



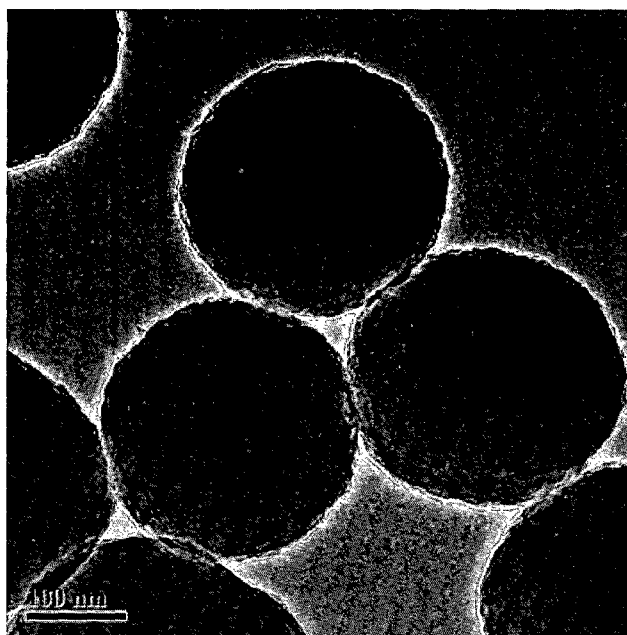
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- (71) Applicant: NANYANG TECHNOLOGICAL UNIVERSITY [SG/SG]; 50 Nanyang Avenue, Singapore 639798 (SG).
- (72) Inventors: YAN, Jian; c/o NANYANG TECHNOLOGICAL UNIVERSITY, 50 Nanyang Avenue, Singapore 639798 (SG). YANG, Liping; c/o NANYANG TECHNOLOGICAL UNIVERSITY, 50 Nanyang Avenue, Singapore 639798 (SG). LU, Xuehong; c/o NANYANG TECHNOLOGICAL UNIVERSITY, 50 Nanyang Avenue, Singapore 639798 (SG). LEE, Pooi See; c/o NANYANG TECHNOLOGICAL UNIVERSITY, 50 Nanyang Avenue, Singapore 639798 (SG).

- (74) Agent: VIERING, JENTSCHURA & PARTNER LLP; P.O. Box 1088, Rochor Road, Singapore 911833 (SG).
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(54) Title: METHODS OF PREPARING MONODISPERSED POLYDOPAMINE NANO- OR MICROSPHERES, AND METHODS OF PREPARING NANO-OR MICROSTRUCTURES BASED ON THE POLYDOPAMINE NANO- OR MICROSPHERES



(57) Abstract: Methods of preparing monodispersed polydopamine nano- or microspheres are provided. The methods comprise providing a solvent system comprising water and at least one alcohol having the formula R-OH, wherein R is selected from the group consisting of optionally substituted C₁C₆alkyl, optionally substituted C₁C₆ alkenyl, optionally substituted C₂#191-C₆#191 alkynyl, optionally substituted C₃C₆ cycloalkyl, optionally substituted C₃C₆ cycloalkenyl, and optionally substituted C₆C₇ aryl; adding dopamine to said solvent system to form a reaction mixture; and agitating said reaction mixture for a time period of 1 to 10 days to form said monodispersed polydopamine nano- or microspheres. Methods of preparing carbon and hollow metal or metal oxide nano- or microspheres using the polydopamine nano- or microspheres are also provided.