

相转移方法制备银纳米粒子单层膜

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摘要 在油酸钠保护下用NaBH₄还原AgNO₃, 制得了银纳米粒子胶体溶液。利用相转移剂NaH₂PO₄等, 使Ag纳米粒子在水/有机相界面之间形成薄膜。形成的Ag纳米粒子膜可以转移到玻璃等基质上, 讨论了其转移机理; 并用石英晶体微天平(QCM)检测了银纳米粒子的相转移量。

关键词 [银](#) [纳米相材料](#) [胶体](#) [相转移反应](#)

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Production of the Monolayer of Ag Nanoparticles by Phase Transferring

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Abstract Ag nanoparticles were produced by the reduction of AgNO₃ with the protecting of sodium oleate using NaBH₄. After adding the transferring reagent NaH₂PO₄, a film of Ag nanoparticles was formed at the interface of water/organic phase. The film could be transferred to a substrate such as glass. The mechanism of the transfer of the film was discussed. Quartz Crystal Microbalance (QCM) was also used to measure the transferred colloidal quantity for Ag nanoparticles.

Key words [SILVER](#) [NANOPHASE MATERIALS](#) [COLLOID](#) [PHASE TRANSFER REACTION](#)

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