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摘要: 以多孔阳极氧化铝膜(anodic aluminum oxide, AAO)为模板, 用磁控溅射的方法制备纳米孔洞阵列金膜, SEM结果表明, 制备得到的纳米孔洞阵列金膜形貌与AAO模板形貌一致, 孔洞阵列规则, 孔径大小均匀。此方法适合于纳米孔洞阵列金膜的复制, 为纳米线、量子点等纳米阵列材料的组装与合成提供新的条件。

关键词: AAO模板, 磁控溅射, 纳米孔洞阵列金膜, 纳米复制

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[Nano-hole array gold film copied from AAO template](#)

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Abstract: Well-aligned and highly ordered nano-hole array gold films were copied from anodic aluminum oxide (AAO) template by magnetron sputtering. SEM shows that the nanoholes of gold films are hexagonally arranged with high regularity consistent with that of AAO template. The mean diameter of the holes was dependent on the corresponding parameter of AAO template.

Compared with AAO templates, the nano-hole array gold films have many advantages in better chemical and thermal stability, and are likely to play an important role in nano-copy field.

Key words: AAO template, Magnetron sputtering, Nano-hole array gold film, Nano-copy

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