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摘要：采用共沉淀法在空心微珠表面上制备出由CoFe₂₀4铁氧体纳米颗粒均匀包覆层。利用X射线衍射仪（XRD）、能谱仪（EDX）和扫描电镜（SEM）对其进行分析表征，包覆层厚度为200nm。将这种复合材料均匀地分散于酚醛树脂粘合剂中，涂刷在面积为200mm×200mm金属板上，制成测试版，用RAM反射率远场RCS测量法对其进行微波吸收测试。测试结果表明，涂层对频率高于16GHz的微波有良好吸收，微波吸收性能好于CoFe₂₀4/Al₂₀3核壳结构纳米颗粒情况。

关键词：

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Hollow glass micro ball coating with CoFe₂₀4 and its
microwave absorption property

Abstract: Spinel CoFe₂₀4 coating shell on the surface of hollow glass micro ball was synthesized by co precipitation method, which was characterized by X ray powder diffraction (X R D), energy dispersive spectrometer (EDX) and scanning electron microscopy (SEM) The as synthesized powder materials were uniformly dispersed in the phenolic cement, then the mixture was painted on metal plate with the area of 200mm×200mm as the test board The test of microwave absorption was carried out by the RAM reflectivity far field RCS method The results indicate that notable microwave absorption performance have been obtained when the microwave frequency above 16GHz This performance is much better than the CoFe₂₀4/Al₂₀3 nanoparticles with core shell structure

Key words:

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