

物理

0.70~2.48 MeV质子在F和Mg上160°背散射截面测量

孙旭芳¹, 王荣^{1, 2, *}, 刘运宏¹, 王广甫^{1, 2}

1.北京师范大学 低能核物理研究所 射线束技术与材料改性教育部重点实验室, 100875 北京

2.北京市辐射中心, 100875 北京

收稿日期 2007-5-25 修回日期 2007-8-6 网络版发布日期: 2007-10-20

摘要 应用北京师范大学2×1.7 MV串列静电加速器提供的质子束, 采用相对测量方法测量了0.70~2.48 MeV宽能区质子在轻核F和Mg上160°(实验室坐标系)背散射截面。测量得到F、Mg各自对应能区的质子共振背散射截面数据, 为含F、Mg轻元素的新型薄膜材料的高灵敏分析提供了实验数据。

关键词 [质子; F; Mg; 背散射截面](#)

分类号 [0571](#)

Non-Rutherford 160° Backscattering Cross Sections of 0.70-2.48 MeV Protons on Fluorine and Magnesium

SUN Xu-fang¹, WANG Rong^{1, 2, *}, LIU Yun-hong¹, WANG Guang-fu^{1, 2}

1. Key Laboratory of Beam Technology and Materials Modification of Ministry of Education, Institute of Low Energy Nuclear Physics, Beijing Normal University, Beijing 100875, China; 2. Beijing Radiation Center, Beijing 100875, China

Abstract Differential elastic 160° backscattering cross sections of 0.70-2.48 MeV protons on fluorine and magnesium were measured by relative measuring method. The analysis proton beams were provided by 2×1.7 MV accelerator at Beijing Normal University. The resonance backscattering cross sections of F and Mg were presented in graphical forms, which should be useful for the sensitive analysis of new thin-film materials with F and Mg.

Key words [proton](#) [F](#) [Mg](#) [backscattering](#) [cross](#) [section](#)

DOI

通讯作者

扩展功能

本文信息

▶ [Supporting info](#)

▶ [\[PDF全文\]\(421KB\)](#)

▶ [\[HTML全文\]\(0KB\)](#)

▶ [参考文献](#)

服务与反馈

▶ [把本文推荐给朋友](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

相关信息

▶ [本刊中包含“质子; F; Mg; 背散射截面”的相关文章](#)

▶ 本文作者相关文章

· [孙旭芳](#)

· [王荣](#)

·

·

· [刘运宏](#)

· [王广甫](#)

·