



## 1- عنوان البحث

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<b>Study on neutron and gamma-ray interactions properties with cobalt-free martensite steel</b>
دراسة خصائص تفاعلات النيوترون وأشعة غاما مع الفولاذ المارتنسييت الخالي من الكوبالت

## 2- بيانات المؤتمر

4th Nuclear Materials Conference 2016, <b>Poster presentation</b> , Montpellier France.	إسم المؤتمر
Montpellier, FRANCE	مكان انعقاد المؤتمر
10-7 نوفمبر 2016	تاريخ انعقاد المؤتمر
دراسة تجريبية	منهجية البحث

## 4- ملخص البحث باللغة الإنجليزية

Electro-slag re-melting technique has been applied to produce steel alloys of different compositions. In these compositions chromium contents have been increased on the expense of iron. Mass attenuation coefficients and effective electron densities have been calculated in the photon energy range from 200 to 2750keV. A comparison between the experimental and the corresponding theoretical results have been performed. The achieved results reveal the superiority of martensite steel compared with the other steel types as a gamma ray shielding material. Also, total neutron cross-sections have been measured for the prepared samples and the obtained results showed that the martensite steel has the highest cross section among the other steel types.



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