

## **Effects of swift heavy ion irradiation on magnetic properties of Fe-Rh alloy**

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We report how swift heavy ion irradiation affects magnetic properties of Fe-50at.%Rh alloys. The alloys are irradiated with 200-MeV Xe-136 ions at room temperature. Before and after the irradiations, the total magnetization of the specimen and the magnetic properties around only the penetration depth of Xe ions are measured by using superconducting quantum interference device (SQUID) and X-ray magnetic circular dichroism (XMCD), respectively. The Values of saturated magnetization at 6000 Oe and the ferromagnetic signals of XMCD strongly depend on the ion-fluence. By comparing the XMCD spectra of the irradiated Fe-50at.%Rh with those of pure-Fe and unirradiated Fe-45at.%Rh, irradiation-induced ferromagnetism in Fe-50at.%Rh alloy is discussed.