

Fall 11-11-2015

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## Recommended Citation

Seung Min Han, "Radiation resistance of vanadium-graphene nanolayered composites" in "Composites at Lake Louise (CALL 2015)", Dr. Jim Smay, Oklahoma State University, USA Eds, ECI Symposium Series, (2016). [http://dc.engconfintl.org/composites\\_all/102](http://dc.engconfintl.org/composites_all/102)

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# **Radiation Resistance of Vanadium-Graphene Nanolayered Composites**

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Metal nanolayered composites are regarded as promising nuclear structural material due to not only the high strength, but due to the ability to absorb the crystalline defects that are introduced from irradiation environment. In this work, vanadium-graphene nanolayered composite is explored for radiation resistance using He ion irradiation tests. Metal-graphene nanolayered composite was previously reported to be ultra high strength due to the effectiveness of graphene in constraining the dislocation motion. Our experimental and MD simulations indicate that the crystalline defects that are produced from He ion irradiations can also be absorbed at the metal-graphene interfaces that results in significantly reduced radiation hardening due to self-healing of defects that are induced from the radiation damage.