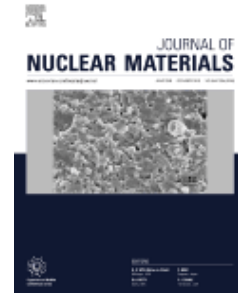




TABLE OF CONTENTS

●	Description	p.1
●	Audience	p.2
●	Impact Factor	p.2
●	Abstracting and Indexing	p.2
●	Editorial Board	p.2
●	Guide for Authors	p.4



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DESCRIPTION

The *Journal of Nuclear Materials* publishes high quality papers in materials research for nuclear applications, primarily fission reactors, fusion reactors, and similar environments including radiation areas of charged particle accelerators. Both original research and critical review papers covering experimental, theoretical, and computational aspects of either fundamental or applied nature are welcome.

The breadth of the field is such that a wide range of processes and properties in the field of materials science and engineering is of interest to the readership, spanning atom-scale processes, microstructures, thermodynamics, mechanical properties, physical properties, and corrosion, for example.

The following list describes topics within the scope of the Journal.

Fission reactor materials, including fuels, cladding, core structures, pressure vessels, coolant interactions with materials, moderator and control components; fission product behavior. Materials aspects of the entire fuel cycle. Materials aspects of the actinides and their compounds. Performance of nuclear waste materials; immobilization of wastes. Fusion reactor materials, including first walls, blankets, insulators and magnets. Neutron and charged particle radiation effects in materials, including defects, transmutations, microstructures, phase changes and macroscopic properties. Interaction of plasmas, ion beams, electron beams and electromagnetic radiation with materials.

Please note: a manuscript must focus on materials science and engineering related to nuclear applications. Thus, all topics within nuclear science and engineering or materials science and engineering do not necessarily fall within the scope. Topics outside the scope of the Journal will not be considered, and potential alternative journals are indicated in brackets in the list below. Typical examples of topics which are out of scope for the Journal include:

(1) Topics in nuclear engineering and other areas not addressing materials, such as: Particle transport, cross-sections or isotope ratios ([Radiation Physics and Chemistry](#); [Annals of Nuclear Energy](#)) Process engineering ([Materials Science and Engineering A](#); [Materials and Design](#)) Thermal hydraulics ([Nuclear engineering and design](#)) Isotope separation processes ([Nuclear Instrument and Methods B](#)) Fusion reactor design and technology ([Fusion Engineering & Design](#)) Plasma physics ([Physics Letters A](#))

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AUDIENCE

Materials scientists.

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GUIDE FOR AUTHORS

INTRODUCTION

The entire submission and review process for the *Journal of Nuclear Materials* is now handled electronically, which shortens publication times. All papers should be submitted electronically at <https://www.evise.com/profile/api/navigate/JNM>.

Types of papers

The *Journal of Nuclear Materials* publishes original research papers, critical reviews, and short communications. Full length papers should report on completed original work rather than incremental research and may embody results of extensive laboratory or field, theoretical or computational investigation, or new interpretations of existing problems. The work must have permanent value and make an original contribution to the field.

Short Communications are short papers that present original and significant material for rapid dissemination. For example, a Short Communication may focus on a particular aspect of a problem or a new finding that is expected to have a significant impact. Short articles include, but are not limited to: discovery or development of new materials, cutting-edge experiments and theory, novelty in simulation and modeling, elucidation of mechanisms. As Short Communications are expected to have higher than average impact on the field rather than report on incremental research, they will receive prioritized and rapid publication.

Journal of Nuclear Materials: Policy on Publishing Conference Contributions

The *Journal of Nuclear Materials* publishes high quality articles in materials science and engineering related to nuclear applications. Articles must be timely, original, and fit the scope of the Journal. Presentations made at conferences, which fulfil these criteria, are therefore welcome. Selected articles from conferences may be grouped in a special issue, and this procedure is given below. Complete proceedings will not be published in *JNM* and requests for this will be forwarded to *Procedia - Materials Science or Physics Procedia*, Elsevier products targeted for this (<http://www.elsevierpublishingsolutions.com/procedia.asp>). Sponsored supplements or themed issues in *JNM* with selected papers on a specific topic can be considered.

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