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Advances in Scintillation Ceramic: Design, Preparation and Characterization

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Since the scintillation material first appeared in the 19th century, research work on scintillation materials has focused more on crystal materials. Until now, many kinds of crystal scintillators have been applied in application fields like high energy physics experiments, medical imaging, security inspection, aerospace, and some other fields. Even so, the time cost and the relatively harsh growth conditions for the growth of crystalline materials are also problems that crystal scintillators have always been facing. Moreover, the segregation of co-doping ions and coloring problems often appear in crystal materials as well. Besides, the harsh growth environment of the crystal material may also introduce some defects, which are harmful to the scintillation performance of the scintillator, such as the anti-site defects in garnet crystal material. In garnet ceramics, the generation of anti-site defects can be greatly suppressed.

Keywords

- scintillation ceramic
- ceramic composition
- scintillation performance
- light output
- slow component
- defects
- luminescence

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Message from the Editor-in-Chief

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