Behavior of MgO Based Ceramics under Electron Irradiation
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MgO is one of environment friendly ceramic material under harsh environment such as electron irradiation. Different response of MgO ceramics under the irradiation was reviewed. The response was in the appearance of surface breakdown/flashover on the surface of MgO after a certain time under irradiation exposure. The different response was shown for small addition of CaO, ZrO2 and SiO2 into high purity of MgO. Addition of CaO resulted in the appearance of flashover could be 30% earlier of that of pure MgO. Moreover, addition of ZrO2 resulted in 70% earlier. On the other hand, small addition of SiO2 revealed that the MgO based ceramics could withstand the appearance of flashover under the same energetic electron irradiation.