

Review of the Neutron Capture Process in  
Fission Reactors\*

by

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ABSTRACT

The importance of the neutron capture process and the status of the more important cross section data are reviewed. The capture in fertile and fissile nuclei is considered. For thermal reactors the thermal to epithermal capture ratio for  $^{238}\text{U}$  and  $^{232}\text{Th}$  remains a problem though some improvements were made with more recent measurements. The capture cross section of  $^{238}\text{U}$  in the fast energy range remains quite uncertain and a long standing discrepancy for the calculated versus experimental central reaction rate ratio C28/F49 persists. Capture in structural materials, fission product nuclei and the higher actinides is also considered.

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