



A brief summary of the discussion from a recent workshop on alpha-particle effects in the Engineering Test Reactor (ETR) is included in this issue along with a set of short papers presented at the workshop. The summary was prepared by L. M. Hively and D. J. Sigmar and circulated to participants in the workshop for comment. Since I was a participant and organizer of the workshop, I was extremely interested and personally involved in the discussions and issues raised during this meeting, which was attended by many key workers in the area. (A list of participants is included at the end of the summary.)

Clearly, we are rapidly moving into an era in fusion development where alpha-particle issues become a key factor in fusion plasma performance. Data on single-particle effects will be obtained from the current generation of large tokamaks (Tokamak Fusion Test Reactor and Joint European Torus). The Compact Ignition Tokamak (CIT) will provide our first experience with a plasma having sufficient fusion reaction rates to provide significant alpha heating. The CIT will use short-pulsed operation, however. Thus, ETR (now the international version is known as ITER—International Thermonuclear Experimental Reactor) will, for the first time, extend burning plasma operation to long-pulse or steady-state conditions where a host of alpha-related issues ranging from collective effects to alpha ash accumulation must be faced. The workshop represents the first comprehensive meeting intended to identify the present status of knowledge in this area and also identify key aspects for future study. Consequently, the summary and companion papers should be of strong interest to readers of *Fusion Technology*. The cooperation of the workshop participants in making this section possible is greatly appreciated.

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