



中科院等离子体所研究员讲堂

特邀报告

报告名称：Why tritium in fusion concerns?

主讲：Tetsuo Tanabe 教授

时间：2018年5月23日上午9:00

地点：601 会议室

授课内容摘要：

In a D-T fusion reactor, 55.6 kg of T and 37 kg of D are burned (consumed) per 1 GWth·year. D and T fuels are continuously fueled in its huge reactor vessel or tokamak system and recovered mostly as gaseous form together with He ash and other gases added intentionally or unintentionally. Because of the radioactivity of T, decaying into ^3He emitting an electron with half-life of 12.6 year, its utilization is strictly restricted by law with accountancy (or under regulation of) of a few tens Bq (order of pg). T handling in small scale is well established, particularly in medical field. We are now facing to new and never experienced problems to handle kg orders of T in a fusion reactor. They are mostly related to T inventory in a reactor vessel and T recycling systems, and precise T accountancy. In the talk, issues relating T to establish the D-T reactor as a safe energy source are discussed in detail.

授课人介绍：

Tetsuo Tanabe, 教授, 中国科学院国际人才计划访问学者。长期在名古屋大学、九州大学等著名学府担任教授职务。曾任日本文部科学省科学技术·学术审议会委员、日本学术振兴会科研费委员会委员、国际氚会议(Tritium) 计划委员会主席、ISFNT大会计划委员会主席、PSI大会国际顾问委员会委员等职。目前已发表论文300余篇, 会议学术报告200余篇, 并出版了《Tritium》(Springer) 等专著。

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