

Abstract:

In this thesis there are summarized in the form of basic knowledge the basic problems of fusion research. It serves as an introduction to this field of physics for beginners, but also intermediate candidates. The first two chapters set out the basic terms and ideas associated with controlled thermonuclear fusion. Further described is the magnetic confinement in tokamaks. Physically most important is the third chapter, which includes more advanced parts of physics. It discusses the main focus of this work, i.e. some of the major problems hindering fusion research. Final fourth chapter is relaxed. It discusses the ideas and visions for the near and distant future.