Master Thesis

Spectroscopy testing and analysis of Ar/H2 mixture plasma

Motivation

Ar/H2 mixing plasma is one of the most promising methods to treat with the carbon contamination on the multilayer surface of EUV or X-ray optics. In our previous research, we found that compared with pure Ar or pure H2 plasma, the removal rate has been increased greatly. In order to investigate what happened in the mixing plasma, we plan to research on this subject with both experiment and simulation. Spectroscopy is one of the most important methods to diagnose plasma in quality, and this work aims to characterize the mixing Ar/H2 plasma, and provides the reference for the practical application in the future.

Task

- Literature research;
- Samples preparation;
- Spectra testing;
- Spectra data analysis;
- Plasma simulation with COMSOL.

Prerequisite

- Master students in Optics, Material Science, Chemistry, Physics or related disciplines are proper candidates for the work;
- Independent both experimental and simulation work, team spirit as well as interest in innovations;
- Experience and knowledge of spectroscopy, plasma is desired but not necessary.