

SOCIETY OF PHYSICS STUDENTS (SPS) EVENT

Fourier Transform Infrared (FTIR) Spectroscopy

Using MIR 8025

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The objective of this research project (physics independent study) was: first, to learn, optimize, and test the new FTIR spectrometer (MIR 8025) and, then, to design and perform a meaningful experiment that can be incorporated into future optics lab. Mica sample available in our lab was used to perform various kinds of experiments to get familiar with the spectrometer, its various components, software and settings. Once optimal settings were achieved, we decided to perform FTIR experiment on epoxy hardening, to check if consistent results can be produced and reproduced and to compare the results with a similar experiment performed at the chemistry department of CSU. We used proper salt plates and quick set epoxy for the experiment. The results that we obtained matched the trend from the chemistry lab results validating our approach and procedure. This project will help incorporating the experiment into future optics lab curriculum.

WHERE

SI – 117 (room next to Physics Computer Lab)

WHEN

Noon- 1pm
Thursday, February 5, 2009