



SUBJECT DATASHEET

Semester:	2009/10/1
Subject:	Technology and structural investigations of polymers II
Code:	VEMKSIB111P
Responsible department:	Institute of Materials Engineering
Responsible department code:	MKSI
Responsible lecturer:	dr. Gábor Szalontai

Educational objectives:

The successful student should be able to choose the proper methods adequate to their particular problems of polymer chemistry.

Detailed content of the subject:

1. Basics of NMR: excitation, acquisition, data processing 2. NMR (C-13 and H-1 spectroscopy) 3. Spectroscopy of polymers 4. Solution studies, methods and spectral information 5. Solid state studies, methods and spectral information 6. Interpretation (1H, 13C), proton decoupling and spectral editing methods 7. Special problems related to polymers: the tacticity of polystyrol 8. Special problems related to polymers: end groups, motions in solids 9. Interpretation exercises (NMR) 10. Infrared and Raman spectroscopy 11. Interpretation exercises (IR and Raman) 12. Mass spectrometry 13. Interpretation exercises (MS, IR, NMR)

Requirements:

Required and suggested references:

J.P. Hore: Mágneses magrezonancia, Nem. Tankönyvk., Bp. 2004 Szalontai G.: Szilárd minták NMR vizsgálatai (2004. CD jegyzet) J.L. König, Spectroscopy of Polymers, Elsevier 2nd edition 2000 F. Wehrli, T. Wirthlin: Interpretation of C-13 NMR Spectra, Heyden, 1976