



## COURSE DATASHEET

<b>Semester:</b>	2012/13/1
<b>Course:</b>	Special Topics for Individual Research
<b>Code:</b>	VEMKSIB122S
<b>Responsible department:</b>	Institute of Materials Engineering
<b>Department code:</b>	MKSI
<b>Responsible instructor:</b>	dr. Tamás Korim

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### Course objectives:

Teaching the treating methods of the special scientific literature. Students are given themes in foreign language. They treat them and give an oral presentation in 30 minutes

### Course content:

NMR spectroscopy in liquid and solid state; Multinuclear NMR methods ( $^{29}\text{Si}$ ,  $^{31}\text{P}$ ,  $^2\text{H}$ ); Cements and concretes with special properties; Bioceramics; Ceramic superconductors; Semiconductors; Aluminium-titanate ceramics; New trends in the field of mechanochemistry; Raw materials in the silicate industry; Glazes for ceramics; Solar cells; Fire resistant materials; New trends in the brick industry (application of the energy grass); Geopolymers; Electron microscopy (TEM, SEM); High strength glasses;

### Requirements, evaluation and grading:

### Required and recommended readings:

Szalontai Gábor: Bevezetés az NMR spektroszkópiába (kidolgozott előadásábrák) Szalontai Gábor: NMR vizsgálatok szilárd fázisban (jegyzet) Szalontai Gábor: NMR spektroszlópia (jegyzet)