cost TD1102
PHOTOTECH: BIOSENSORS & BIOCHIPS

Short Term Scientific Mission

TD1102-18939

Project: New sensors based of dendrimers modified with 1,8-naphthalimides

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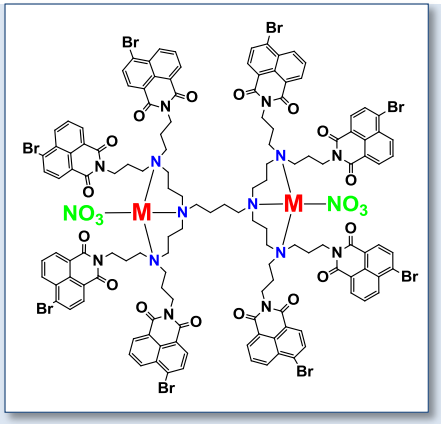
Period of STMS :1/07/2014-10/07/2014
Host institution: Hacettepe University,
Engineering Faculty, Food Engineering Department
Ankara, Turkey)
Mentor: İsmail Hakkı Boyacı



Aims & subject of work : The scope of our cooperation covers the design, synthesis and investigations of new fluorescent dendrons and dendrimers with potential biological activity and biocensors properties.

Argumentation of necessity of STSM: I have had the opurtunity to investigate some of our compounds with methods which are not aveilable at our University

Workplan/timeschedule followed:

• Investigation of the possibilities to use some new polyamidoamine dendrimers modified with 1,8-naphthalimide such as biosensors in aqueous media.

•Different new spectral methods as Raman and FTIR spectroscopy (Micro Raman system with 532 nm, 785 nm and 1064 nm laser source and FTIR –ATR, NIR, MIR, FIR) have been used during the investigations.

Main results and outcome :

During my visit in Ankara some dendron and dendrimer metal complexes have been investigated by different spectral methods as Raman and FTIR spectroscopy (Micro Raman system with 532 nm, 785 nm and 1064 nm laser source and FTIR –ATR, NIR, MIR, FIR Raman spectroscopy, the results have been discussed and they will be published. The main results have been published:

1. S. Yordanova, H. T.Temiz**, I. H. Boyaci**, S. Stoyanov, E. Vasileva-Tonkova, A. Asiri, **I. Grabchev**, Synthesis, characterization and *in vitro* antimicrobial activity of a new blue fluorescent Cu(II) metal complex of bis-1,8-naphthalimide, **Journal of Molecular Structure**, *1101, 2015, 50-56.*
2. D. Staneva, E. Vasileva-Tonkova, M. Makki, T. Sobahi, R. Abdel-Rahman, **I. H. Boyaci, I. Grabchev**, Synthesis and spectral characterization of a new PPA dendrimer modified with 4-bromo-1,8-naphthalimide, **Tetrahedron,** 71 (7) 2015, 1080-1087