

CEEC-TRAC4

BOOK OF ABSTRACTS

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**4th Central and Eastern European Conference
on Thermal Analysis and Calorimetry
28-31 August 2017
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**4th Central and Eastern European Conference on
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Synthesis and investigation of pyridine modified biopolymer fibers for antibacterial textile production

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There is an increase in the prevalence of patients infected with methiciline resistant *S. aureus* and 95% of these patients do not respond to first class antibiotics such as peniciline or ampiciline [1]. Antimicrobial drugs are considered as the most effective mean with respect to both cost and drug effectiveness [2]. In order to prevent MRSA based infections development of new antibacterial textiles have gained importance [3]. Thus, for an effective struggle mixed pyridine derivatives of metal halogen complexes, which show antibacterial activity, and textiles functionalized with these complexes have gained importance both with respect to cost effectiveness and drug activity.

The micro-fibers obtained by incorporating the complexes (drugs), which have the general formula ML_2Cl_2 (L: 2-amino-3-methyl pyridine, 2,6-diamino pyridine; M: Ni (II), Cu(II), Co(II)), into bio- polymers such as cellulose based polymers –namely, cellulose acetate and hydroxypropylmethyl cellulose- via electrospinning are characterized by ¹H-NMR, FE-SEM images, TG/DSC and FT-IR spectra. The functionalized fibers thus prepared are targeted to be used in production of antibacterial textiles.

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