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21st CEUM

21st Central European NMR Symposium

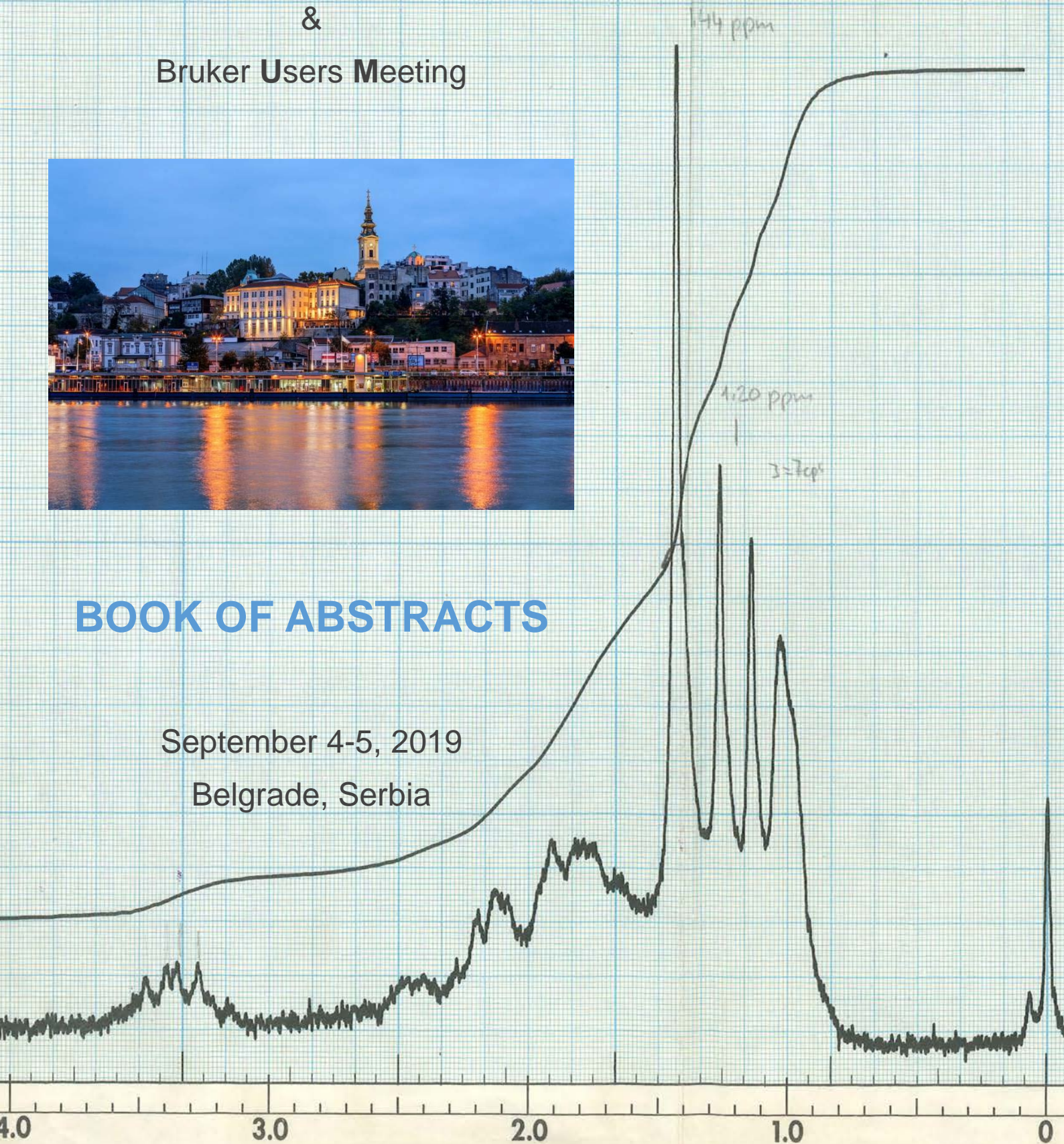
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Bruker Users Meeting



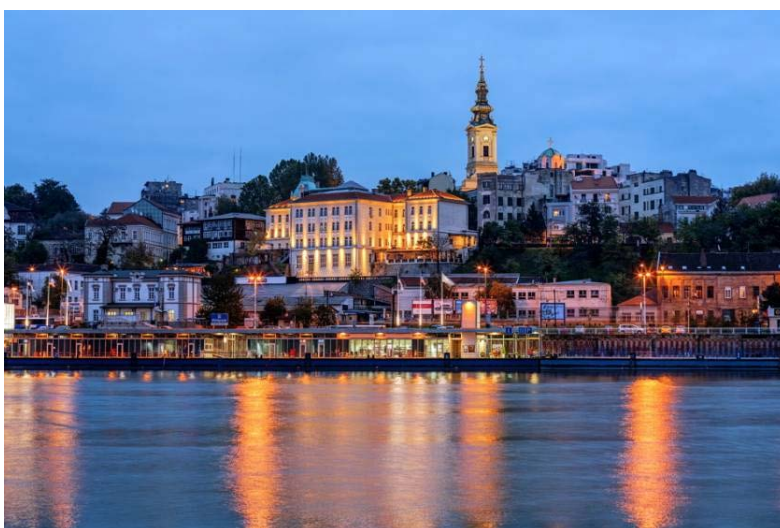
BOOK OF ABSTRACTS

September 4-5, 2019
Belgrade, Serbia



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EDITOR IN CHIEF: Angelo Ripamonti

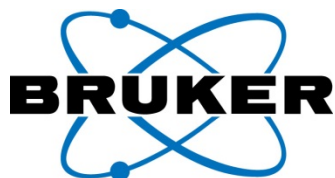
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Preface

The 21st Central European NMR Symposium & Bruker users meeting (CEUM) is an important scientific and professional event for all NMR users in Central Europe.

It has already a long history and has travelled along many counties in Europe.

It has always been an important occasion to share experience and know-how inside the community and meet scientists working mainly in the close countries (but not only!) in order to built up a stronger NMR community and have also a vision on new applications of NMR and new developments in the Magnetic Resonance Technology.

We are sincerely grateful to the lectures and guests coming from Greece, Bulgaria, Romania, Moldova, Croatia, Slovenia, Bosnia and Herzegovina, Hungary, the Netherlands, US and from different cities from Serbia to have jointed this meeting.

He sincerely hope that all our effort will be lead also this year in this very nice city to a interesting and successful conference.

Editor in chief

Angrlo Ripamonti

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PHOTOINITIATED THIOL-ENE COUPLING REACTION USING LED NMR SPECTROSCOPY

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Versatile LED NMR spectroscopy [1] was successfully performed for *in situ* study of thiol-ene modification of (co)polymers without additional photoinitiator. For the purpose poly(allyl glycidyl ether) (PAGE) homopolymers was reacted with few mono- and dithiol oligo- or polyethylene glycols (PEG) via UV illumination (365 nm wavelengths). This methodology uses LEDs as light sources, thereby provides opportunities to conduct effective photoinitiated experiments in combination with whole variety of NMR methods for studies of photochemical reactions.

Thus the progress of the process was followed by ¹H NMR spectra and diffusion experiments (DOSY) allowing the study of the photochemical reactions as well as the process of association/aggregation of macromolecules in solution. Proton spectra and GPC traces of resulting products support the expected turnaround of “click” reaction and formation of pegylated (co)polymers. In some cases upon coupling with dithiol reagent, formation of a gel-fraction in a noticeable amount was observed, suggesting occurring of cross-linking reaction, which is subject of a further study.

ACKNOWLEDGMENTS

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