University of Belgrade
Technical Faculty in Bor

6th INTERNATIONAL STUDENT CONFERENCE ON TECHNICAL SCIENCES

BOOK OF ABSTRACTS

Students from the Technical Faculty in Bor paid a visit to the open pit coal mine Drmno and the cooper open pit Veliki Krivelj, Serbia

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Saša Stojadinović
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At the beginning...

Among us, there are some remarkable young people whose ideas will maybe help shape our future. Our goal, as faculty and members of the industry should be to recognize those students, support their ideas and help them in their research. Most of all we must do our best to help them share their findings. That is why this year, for the sixth time, Technical faculty in Bor organizes the International student conference on technical sciences in an attempt to provide a forum for those exceptional young people to present and share their ideas, to withstand both compliments and criticism from their contemporaries, to gather new life experience and most of all, to spend time among friends and colleagues.

On behalf of the Organizing committee

Prof. dr Saša Stojadinović

The most exciting phrase to hear in science, the one that heralds new discoveries, is not 'Eureka!' but 'That's funny...'

Isaac Asimov

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ONE-STEP EXTRACTION OF CD, NI, SB AND V APPLLIED TO THE RIVER AND ACCUMULATION SEDIMENTS LOCATED IN SERBIA

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Abstract

The consequence of elevated values of toxic pollutants, which originate from numerous human activities, is contaminated environment [1]. Rapid development of industry and agriculture contributed to increase in heavy metals in invertebrates, fish and humans [2]. Heavy metals accumulate in sediments over time which might be a trigger for numerous human diseases due to possibility of transport of these metals in water medium and entering the food chain [3].

The aim of this study was the estimation of element contamination level in sediments of the important rivers, accumulation and their tributaries in Serbia. The determination of the sample contents of the 4 elements (Cd, Ni, Sb and V) was conducted by the one-step extraction with inductively coupled plasma atomic emission spectrometry (ICP OES). Extraction was done with three different acidic extraction agents. Total of 33 samples of sediments from 16 major river and their tributaries in Serbia wereanalyzed. The analyzed sediments showed high concentrations of Cd and Ni, which may have great negative environmental impacts.

In sediments from Zapadna and Južna Morava, Tisa and river Pek the highest concentrations of Cd was detected. The concentrations of Ni were above maximum permissible concentration in Vrutci and Zapadna Morava river sediments. Results showed that the content of Sb was low in majority of the samples. The highest content of V was extracted from Barje sediment sample.

***Keywords**: river sediments, heavy metals, ICP, pollution*

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