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XVII

Synthesis : : Materials : : Corrosion : : Environment : : Energy

**YUCORR**

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**MEĐUNARODNA KONFERENCIJA**

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**STECIŠTE NAUKE I PRAKSE U OBLASTIMA KOROZIJE, ZAŠTITE MATERIJALA  
I ŽIVOTNE SREDINE**

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**MEETING POINT OF THE SCIENCE AND PRACTICE IN THE FIELDS OF CORROSION,  
MATERIALS AND ENVIRONMENTAL PROTECTION**

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**KNJIGA IZVODA RADOVA**

**BOOK OF ABSTRACTS**

**Pod pokroviteljstvom**

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*Heavy metal accumulation in soil and plant tissues of Horse-chestnut (Aesculus hippocastanum L.) planted in urban areas*

M. Pavlović, D. Pavlović, M. Marković, Z. Mataruga, G. Gajić, O. Kostić, S. Jarić, P. Pavlović, M. Mitrović

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*Ever-growing urban population, industrial activities and traffic, inevitably lead to increased pollution and production of waste which is disposed in urban areas. Planting green areas is one of the most important ways of mitigating pollution originating from different sources. These areas can also be used for environmental monitoring of urban conditions. Horse-chestnut (Aesculus hippocastanum L.) has been intensively grown in urban landscaping in Serbia because it is considered to have exceptional adaptability to prevailing ecological conditions and tolerance to different types of pollution. In this regard, heavy metal accumulation in soil and plant tissues (bark and leaves) in four urban parks in the cities exposed to airborne pollutants from various industrial activities, waste disposal and traffic was analyzed: Pančevo (factory of nitric fertilizers and refinery), Smederevo (iron smelter), Obrenovac (thermoelectric power plant and fly ash disposal site), Belgrade (traffic) and Control site - Topčiderski park (without direct source of pollution).*

*Results obtained in this study revealed toxic levels of B and Cu, but at the same time deficit in Mn and Zn in either plant tissues or soil samples in examined sites. The highest concentration of all metals in plant tissues was recorded in Belgrade ( $p < 0.05$ ), due to heavy traffic. Although A. hippocastanum is a good heavy metal accumulator, it is not suitable for planting in urban areas, due to toxicity symptoms in form of leaf chlorosis and necrosis.*