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in kemijsko tehnologijo

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*VABILO NA PREDAVANJE
V OKVIRU DOKTORSKEGA ŠTUDIJA
KEMIJSKE ZNANOSTI*

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z naslovom:

**A brief introduction to perovskite-type
compounds**

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Vljudno vabljeni!

Povzetek:

Over the last few decades, within the field of material science perovskite-type compounds (ABX_3) have attracted a great scientific interest both from fundamental and applicative point of view. Despite the simplicity of the original perovskite crystal structure, this structural type shows enormous possibilities of compositional and structural variations, resulting with manifestation of intriguing, unusual and unique physical properties. Thus, some perovskites exhibit high-temperature superconductivity, colossal magnetoresistance, ferroelectricity, piezoelectricity, optical, catalytic properties *etc.* Most recently, semiconductive organic-inorganic perovskites have emerged as a new class of light-harvesting materials with outstanding performances for solar cell applications, as well as, other photovoltaic devices.

In this lecture, a general overview of perovskite-type structure, different classes of perovskites, synthesis and some of their properties will be presented. The search for new organic-inorganic perovskites suitable for application in photovoltaic devices will also be discussed and the current directions in this field will be highlighted. An insight into some areas of our research related to perovskites will be given and some of our results will be shown.

Key words: perovskite-type structure, synthesis, properties, organic-inorganic perovskites.