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**XIV МЕЂУНАРОДНИ НАУЧНИ СКУП
САВРЕМЕНИ МАТЕРИЈАЛИ 2021**

**ПРОГРАМ РАДА И
КЊИГА АПСТРАКАТА**

**XIV INTERNATIONAL SCIENTIFIC CONFERENCE
CONTEMPORARY MATERIALS 2021**

**PROGRAMME AND
THE BOOK OF ABSTRACTS**

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ОРГАНИЗАТОР НАУЧНОГ СКУПА
Академија наука и умјетности Републике Српске

СУОРГАНИЗАТОРИ
Alma Mater Europaea
Технички универзитет Габрово

ПОКРОВИТЕЉ НАУЧНОГ СКУПА
*Министарство за научнотехнолошки развој,
високо образовање и информационо друштво*

ОДРЖАВАЊЕ СКУПА СУ ПОМОГЛИ
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INFLUENCE OF SYNTHESIS CONDITIONS ON ADSORPTION CAPACITY OF SBA-15/ALGINATE ADSORBENT FOR REMOVAL IONS OF NICKEL(II) AND LEAD(II) FROM AQUEOUS SOLUTION

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Abstract: Abstract: Among different ordered mesoporous silicas, SBA-type silicas are the most frequently studied. SBA-15 is an interesting mesoporous silica material having highly ordered nanosize pores and a large surface area so is widely used as adsorbents, catalyst supports and drug delivery materials. Alginate as suitable biopolymer supporters improves the inappropriate physical form of mesoporous SBA-15 for practical purposes. Immobilization in polymeric matrix increases the chemical and mechanical stability of mesoporous SBA-15. Influence of synthesis conditions on adsorption capacity of SBA-15/alginate adsorbent for removal ions of nickel (II) and lead (II) from aqueous solution was investigated. Two forms of SBA-15/alginate adsorbent were prepared. Alginate gel was prepared using calcium chloride solution. Adsorption capacity behavior ions of nickel (II) and lead (II) on the two types of SBA-15/alginate adsorbent was carried out using inductively coupled plasma optical emission spectrometry (ICP-OES). Obtained results were compared with results for similar SBA-15/alginate adsorbents.

Key words: Mesoporous SBA-15, Alginate, Biopolymer, Adsorption, Nickel (II), Lead (II).

PHONON CONTRIBUTION TO THE HEAT CAPACITY OF ULTRATHIN CRYSTALLINE FILM THROUGHOUT THE ENTIRE TEMPERATURE AREA

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