Mineral nanotubes in the recent marine sediments from the southeastern Adriatic

Mileusnić, Marta; Škapin, Srečo D.; Ivanić, Maja; Jurina Tokić, Irena; Sondi, Ivan

Mineral nanotubes in the recent marine sediments from the southeastern Adriatic

M. Mileusnić[1], S.D. Škapin[2], M. Ivanić[3], I. Jurina Tokić[3], I. Sondi[1*]

[1] *Faculty of Mining, Geology and Petroleum Engineering, Pierottijeva 6, Zagreb, Croatia*
[2] *Jožef Stefan Institute, Jamova 39, Ljubljana, Slovenia*
[3] *Ruđer Bošković Institute, Bijenička cesta 54, Zagreb, Croatia*
[*] *Corresponding author: ivan.sondi@rgn.hr*

Keywords: clay-sized particles; mineral nanotubes; recent marine sediments, Adriatic sea

The mineral composition of recent marine clayey sediments from different sedimentological environments of the southeastern Adriatic was investigated. The main objective was to determine the structural and morphological properties of submicron-sized mineral particles that occur in the investigated sediments. The mineral particles were examined by X-ray diffraction (XRD), field-emission scanning electron microscopy (FESEM) and electron microprobe energy dispersive X-ray analyses (EDX). The results obtained for the first time identify the presence of unusual mineral forms, nanotubes, which have not been determined in modern sediments of the Adriatic (Fig. 1). The occurrence, origin and structural and morphological properties of these solids will be discussed.

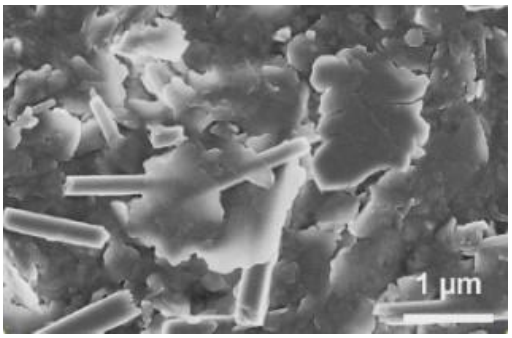

Fig. 1: FESEM photomicrograph of tubular mineral particles in size fraction containing particles with diameters <2 µm.

Acknowledgements: This work has been fully supported by Croatian Science Foundation under the project 2504 – NanoMin (Nanominerals in sediments and soils: formation, properties and their role in biogeochemical processes).