

# A possibility of detection of chemical soldering in medieval jewellery

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The aim of this presentation is to discuss some technological details of medieval jewellery on the basis of studies on lunula-type ornaments from a hoard in Odra Nowa, Wielkopolskie Voivodeship, Central Poland (fig.1). The most important research problems are the types of soldering which were applied in order to attach ornamentation details (granules and wire) to the surface of the artefacts in question (fig. 2). Types of solders which were in use in Antiquity and in the Middle Ages were discussed. Five fragments of silver lunulas were examined using optical light microscopy, SEM-EDX, micro-Raman spectroscopy and XRD. Results produced by a combination of these methods confirmed the use of chemical soldering in the ornament of the discussed artefacts. In conclusion, it was said that the presence of individual elements in the solder may have been due to different reasons, such as the use of certain types of ores or of metal from re-melted dirhams.



Fig. 1. Studied lunulas from the Odra Nowa hoard: obverse and reverse

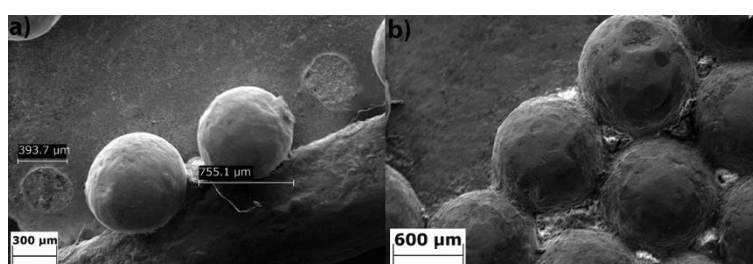


Fig. 2. a) Lunula 2261, obverse and b) Lunula 2262, obverse. SEM-SE images of cloud-shaped soldering region located between granules