ARISTOTLE UNIVERSITY OF THESSALONIKI

RESEARCH COMMITTEE

DEVELOPMENT OF NANOMATERIALS FOR PRINTABLE ELECTRONICS AND NANOFLUIDS

The Physical Metallurgy Laboratory (PML) of the Mechanical Engineering Department of the Engineering School of the Aristotle University of Thessaloniki was established in 1976. The main purpose of the Laboratory is to provide high level education on both undergraduate and postgraduate levels, on subjects related to Materials Science and Technology. PML aims at the study of materials' properties and the development of novel materials of particular commercial and industrial interest. For many years it has focused on nanotechnology and in 2015 commercialized the developed technology through the spin-off PLiN-Nanotechnology SA. PML participates in National and European competitive research programs and provides relative services. In 2008, PML was certified by ISO 17025.

PHYSICAL METALLURGY LABORATORY, SCHOOL OF MECHANICAL ENGINEERING, AUTH

Head of the Laboratory Prof. Dr.-Eng. Nikolaos Michailidis

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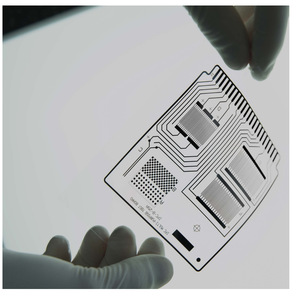

Figure 1
Example of printed electronics pattern.

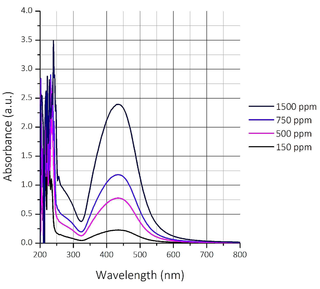

Figure 2
UV-Visible spectroscopy analysis of AgNPs suspensions at different concentrations.

Figure 3
Superconcentrated conductive silver nanoink.

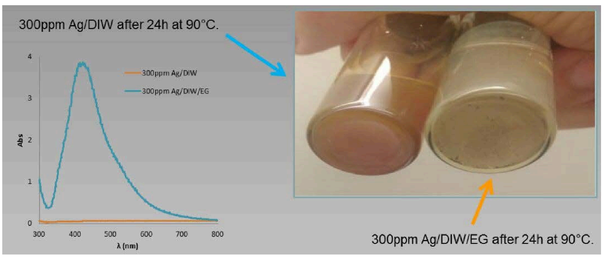

Figure 4
Effect of dispersion medium on the stability of Ag nanofluids after heat treatment at 90°C.

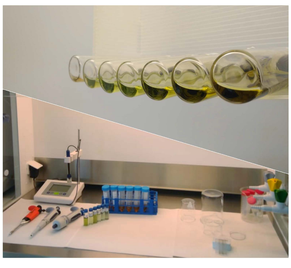

Figure 5
300 ppm CuO/DIW/EG in several volume ratios after 7 thermal cycles at 80°C.

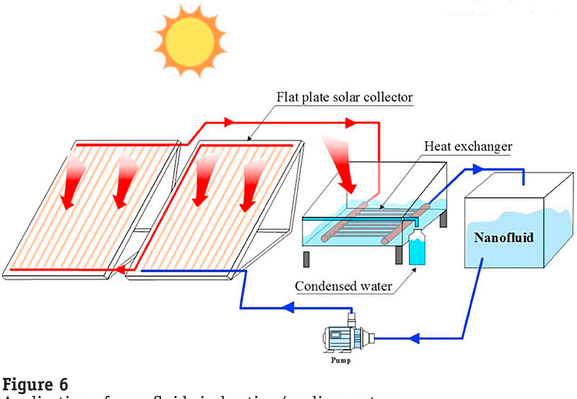

Figure 6
Application of nanofluids in heating/cooling systems.

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