

Course Title	ORGANIC/INORGANIC NANOCOMPOSITES: PROPERTIES AND APPLICATIONS
Instructor	Giuseppe Cavallaro
N of hours	10
description	Presentation of the properties and applications for nanocomposites based on inorganic and organic components.
contents	<ul style="list-style-type: none"> • Preparation of nanocomposite materials in aqueous, gel and solid phases. • Correlation between the structure and the mesoscopic properties. Barrier effect on the thermal resistance. Mechanical behaviour, transparency and water uptake ability. Control of the hydrophobic/hydrophilic character of the surfaces. • Nanocomposites for cultural heritage conservation: surface cleaning protocols and consolidation/deacidification of lignocellulosic artworks. • Nanocomposites for environmental purposes: biocompatible packaging and decontamination. • Nanocomposites for biomedical and pharmaceutical applications: controlled delivery of active molecules.