Department of Materials Science and Technology
School of Sciences & Engineering
University of Crete

18 October 2023

Solid Materials (METY- 501)

Writing Projects:

1. Metal chalcogenide photocatalysts for CO_2 reduction
2. Metal phosphide electrocatalysts for hydrogen evolution reaction
3. Inorganic photonic band gap materials
4. Fabricating nanoelectrodes for electrochemical sensing
5. Nanoscale patterning with scanning probe microscopes (STM, AFM)
6. Self-assembly of 3D nanocrystal superlattices
7. Nanostructured thermoelectric materials
8. Carbon nanotubes: Synthesis and applications
9. Multifunctional nanorods for biomedical applications
10. Nanostructured metal-oxide materials as cathode catalysts for lithium-air batteries
11. Raman Spectroscopy in Graphene and TMDs
12. Strain engineering in semiconducting 2D TMDs
13. Excitonic complexes in TMD monolayers
14. Spin-valley polarization and intervalley scattering in TMDs
15. 2D van der Waals Heterostructures: Interlayer Excitons
16. Second Harmonic Generation (SHG) in 2D crystals
17. Chemical Vapor Sensing in TMDs
18. Tip Enhanced Raman Spectroscopy – Principles and Applications

19. Transparent conducting materials in optical and electronic devices

20. Hard radiation detection from semiconductors

21. Electroluminescence in semiconductor light-emitting diodes

22. Thin-film solar cells from emerging semiconductors

23. Ferroelectric applications of polar ceramic materials

24. Crystal growth of technologically relevant semiconductors

25. Epitaxially-grown quantum well nanostructures

26. Solid electrolytes in fuel cells

27. Metal-organic frameworks for gas separation applications

28. Dielectric materials for frequency tuning in microwave circuits

29. Transition metal-based superconductors

Οι ακόλουθοι παράμετροι θα πρέπει να ληφθούν υπόψη:

Διάταξη σελίδας	**Γραμματοσειρά**	**Μέγεθος γραμματοσειράς**	**Μέγεθος κειμένου**	**Διάστιχο**	**Περιθώρια**
A4	Times New Roman	12	~4000 words	1.5 lines	2 cm side 1,5 bottom

Παρουσίαση εργασιών:

Διαθέσιμος Χρόνος	**Τυπικός Αρ. διαφανειών**	**Format**
20 min	15	PowerPoint