europass Curriculum vitae

PERSONAL INFORMATION

Manoj Settem Narasimha

WORK EXPERIENCE

Feb 2021 – Present — Postdoctoral Researcher

nanoCAFE Lab
Department of Mechanical and Aerospace Engineering
Sapienza University of Rome

- Finite-temperature structures of metal nanoclusters in the entire temperature range
- Structure, energetics, and diffusion of Au clusters supported on graphene and graphite
- Structural transitions in metal nanoclusters

Jul 2013 – Dec 2015 — Instructor

MAC Technologies (Education Company), Hyderabad, India

Jul 2011 – Jun 2013 — Applications Engineer (Bright Field Optical Inspection)

Applied Materials, Bangalore, India

EDUCATION

2017–2020 — PhD, Metallurgical & Materials Engineering

Thesis Title: "Atomistic modelling of the structure and the stability of silver-copper nanoalloys"

Indian Institute of Technology Madras, Chennai, India

2009–2011 — Master of Technology, Metallurgical & Materials Engineering

Indian Institute of Technology Kharagpur, Kharagpur, India

2004–2008 — Bachelor of Technology, Materials & Metallurgical Engineering

Indian Institute of Technology Kanpur, Kanpur, India

PUBLICATIONS

[1] **Manoj Settem**, Melisa M Gianetti, Roberto Guerra, Nicola Manini, Riccardo Ferrando, and Alberto Giacomello. "Gold Clusters on Graphene/Graphite—Structure and Energy Landscape". In: ***Small Science*** 4 (2024), p. 2400078.

[2] **Manoj Settem**, Mahabul Islam, and Ajeet K Srivastav. "Grain boundary junction disclinations in nanoparticles". In: ***Acta Materialia*** 274 (2024), p. 120031.

[3] Emanuele Telari, Antonio Tinti, **Manoj Settem**, Luca Maragliano, Riccardo Ferrando, and Alberto Giacomello. "Charting Nanocluster Structures via Convolutional Neural Networks". In: ***ACS Nano*** 17 (2023), pp. 21287–21296.

[4] **Manoj Settem**, Cesare Roncaglia, Riccardo Ferrando, and Alberto Giacomello. "Structural transformations in Cu, Ag, and Au metal nanoclusters". In: ***Journal of Chemical Physics*** 159 (2023), p. 094303.

[5] **Manoj Settem**, Riccardo Ferrando, and Alberto Giacomello. "Tempering of Au nanoclusters: capturing the temperature-dependent competition among structural motifs". In: ***Nanoscale*** 14 (2022), pp. 939–952.

[6] **Manoj Settem**, Pranav Kumar, Ilaksh Adlakha, and Anand K. Kanjarla. "Surface reconstruction in core@ shell nanoalloys: interplay between size and strain". In: ***Acta Materialia*** 234 (2022), p. 118038.

[7] **Manoj Settem**, Ajeet K. Srivastav, and Anand K. Kanjarla. "Understanding the strain-dependent structure of Cu nanocrystals in Ag–Cu nanoalloys". In: ***Physical Chemistry Chemical Physics*** 23 (2021), pp. 26165–26177.

[8] **Manoj Settem** and Anand Krishna Kanjarla. “Role of core-shell energetics on anti-Mackay, chiral stacking in AgCu nanoalloys and thermally induced transition to chiral stacking”. In: ***Scientific Reports*** 10 (2020), p. 3296.

[9] **Manoj Settem** and Anand Krishna Kanjarla. “On the nature of the structural transitions between anti-Mackay stacking, chiral stacking and their thermal stability in AgCu nanoalloys”. In: ***Computational Materials Science*** 184 (2020), p. 109822.

[10] **Manoj Settem**. “Novel structural motifs: chiral AgCu nanoalloys with chiral Cu core”. In: ***Journal of Alloys and Compounds*** 844 (2020), p. 155816.

[11] **Manoj Settem**. “On the structural analysis of ordered B2 AlNi nanoparticles obtained using freezing simulations”. In: ***Intermetallics*** 106 (2019), pp. 115–123.

[12] **Manoj Settem**, Mahabul Islam, and Anand Krishna Kanjarla. “On the effect of relative stabilities of FCC-like and HCP-like atoms on structure of FCC silver nanoclusters”. In: ***Computational Materials Science*** 148 (2018), pp. 266–271.

[13] **Manoj Settem**, Piu Rajak, Mahabul Islam, and Somnath Bhattacharyya. “Influence of supporting amorphous carbon film thickness on measured strain variation within a nanoparticle”. In: ***Nanoscale*** 9 (2017), pp. 17054–17062.

[14] Soumitra Chakraborty, **Manoj Settem**, and Sudhindra B. Sant. “Evolution of texture and nature of grain growth on annealing nanocrystalline Ni and Ni-18.5%Fe in air”. In: ***Materials Express*** 3 (2013), pp. 99–108.