When each atoms counts

How the behaviour of a material evolves as it built up atom by atom from the monomer to the bulk has been a fascinating question from the time of ancient Greek philosophers who were the firsts to propose the concept of atoms as the smallest indivisible units of a substance.

But do you know that below the nanoscale (<1 nm) a very small cluster of atoms can drastically change its properties by adding or removing just a single atom ?

The goal of our research team is to understand how structural, electronic, magnetic and chemical properties evolve atom by atom, from the monomer to the bulk.

The newly developed size-selected cluster source of the Nanoscale Materials Lab at Elettra, will allows us to reach our goal. We will do it by coupling the clusters with the still growing family of 2D materials we are working with since long time (graphene, h-BN, MoS₂, borophene, etc) The new set-up, in combination with the synchrotron light of Elettra, represents a truly unique system worldwide in the field of experimental condensed matter physics.



If you want to join us in this exciting challange for your Bachelor or Master degree do not mber of atoms hesitate to contact us !

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Gd Tb

Pu AmCm Bk Cf



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