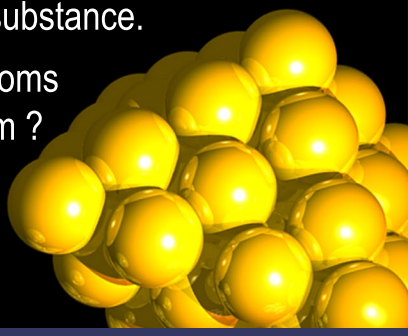
# Down to the sub-nanoscale

nmLab
nanoscale materials Laboratory

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.

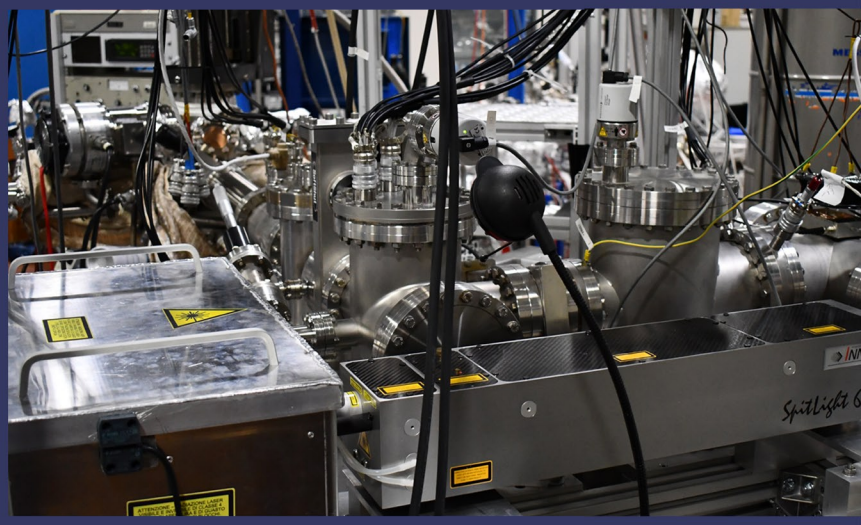
But do you know that below the nanoscale (<1 nm) a very small cluster of atoms can drastically change its properties by adding or removing just a single atom ?

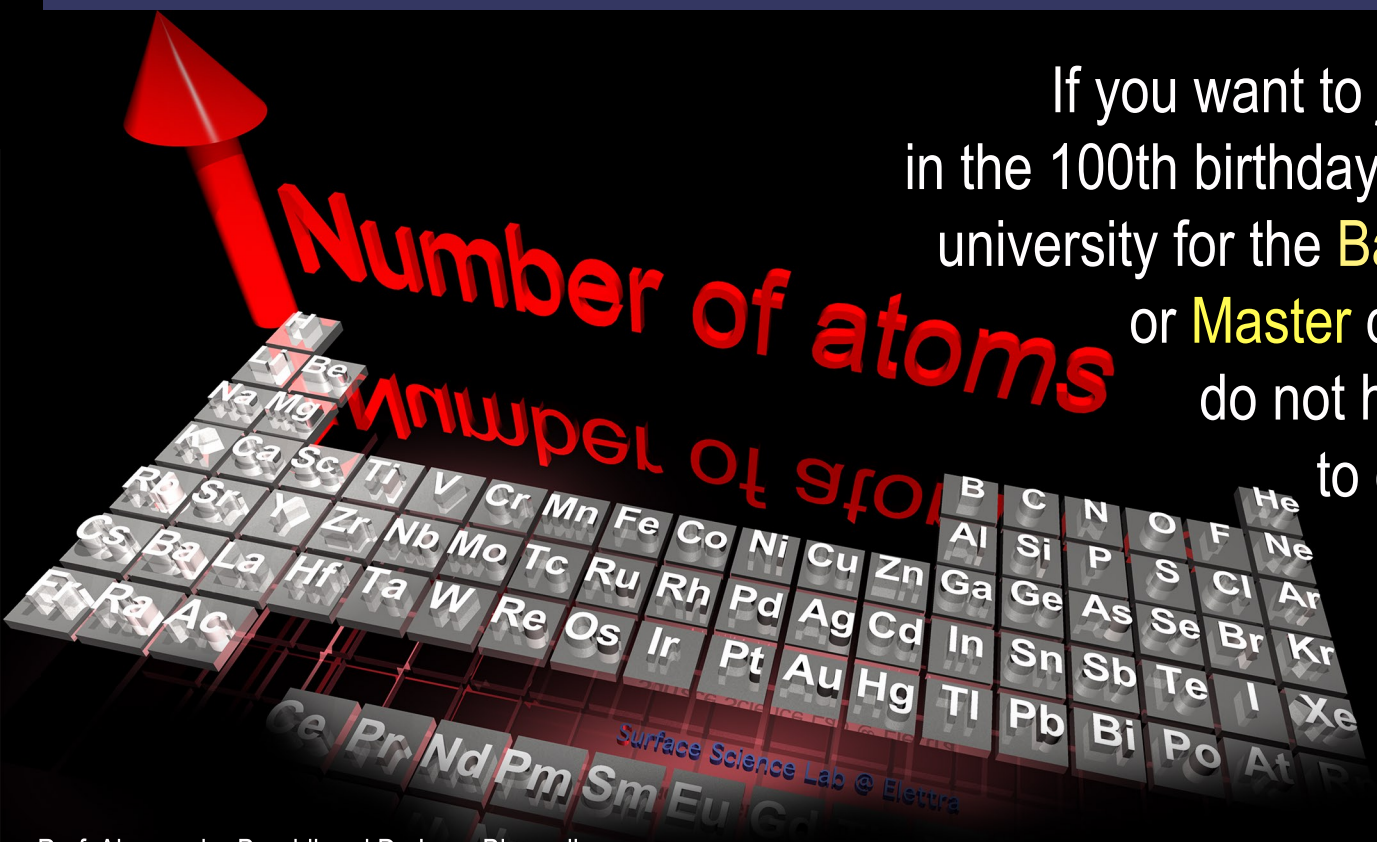
The goal of our research team is to understand how structural, electronic, magnetic and chemical properties evolve atom by atom, from the monomer to the bulk. How? Using ENAC (**E**xact **N**umber of **A**toms in each **C**luster)



The ENAC source coupled with the synchrotron light of **Elettra 2.0** represents a truly unique system worldwide in the field of experimental condensed matter physics. We couple 0D nanoclusters with 2D materials we are working with since than 15 years, such as graphene, h-BN, $MoS_2$, $WS_2$, silicene, borophene, etc.

Soon a new Microscope will join our set-up to provide a new perspective to our studies.






If you want to join us in the 100th birthday of our university for the Bachelor or Master degree do not hesitate to contact us !

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