

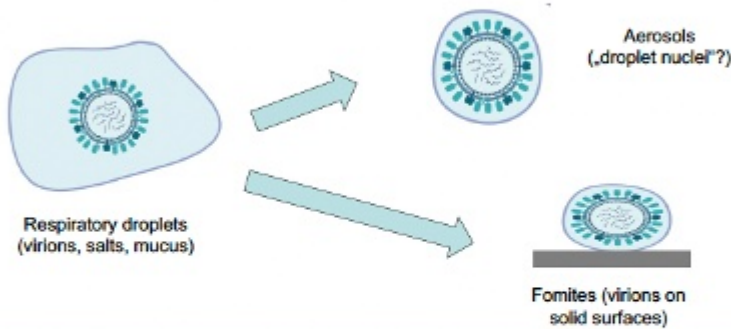
The Nanoscience Cooperative Research Center, CIC nanoGUNE, located in Donostia / San Sebastian, Basque Country (Spain), is currently looking for a

**MASTER STUDENT**  
to work on

**Self-assembly**

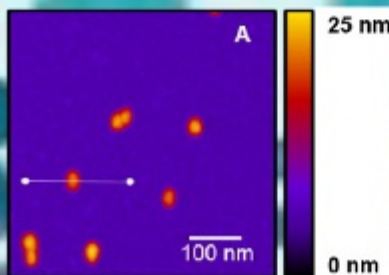
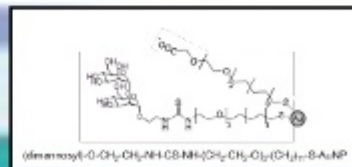
The challenge: Ultrathin water layers on particles

Imaging water on virions (virus particles) during transmission

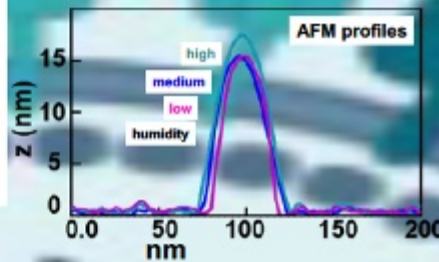


Virion spike drying emulsion on the nanoscale

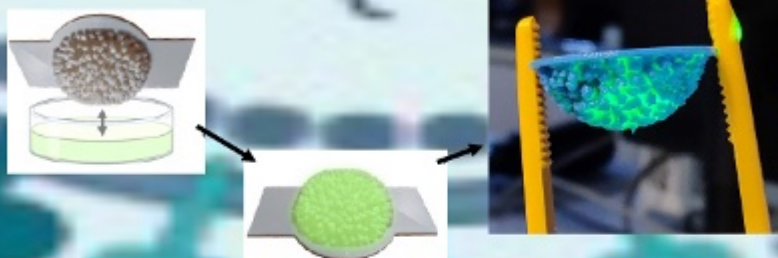
Atomic force microscopy imaging of **solid** and **liquid surfaces** on mannosylated Au particles – emulating the surface „spike“ glycoproteins in size and chemistry



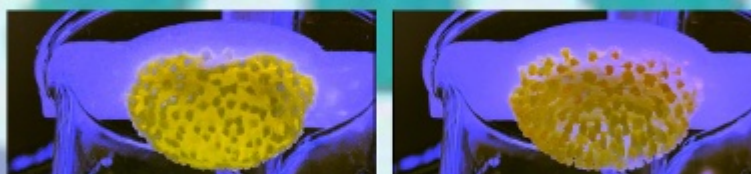
2.4 nm water layer at very high humidity  
Drying to an ultrathin layer at 50%  
Preserved even at 15%?



3D-printed models



Hydrophilization, immersion into fluorescein/water, slow drying, video under UV illumination



DNA digital storage:



The message "Nanogune" was  
5'-ACTGAGCAAGTGA  
You can try to code your own m

- 1 base can store 2 bits
- 1mm<sup>3</sup> could ideally store 9 TB
- Net information density: 0.11bytes/base

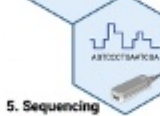
00	- A
01	- G
10	- C
11	- T

1. Encoding



6. Decoding

We can read the original sequence,  
the message has been received!

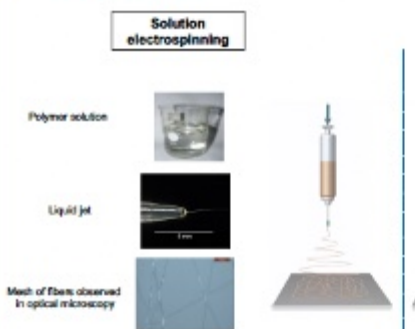


5. Sequencing



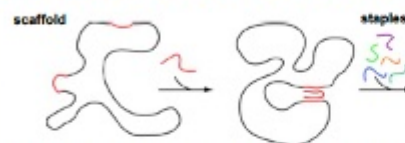
The PCR products undergo Sanger sequencing

Nanofibers production



- + Easy, no need for high temperatures
- We need a solvent

DNA origami for additional information storage



Site-specific anchoring of proteins



Candidates should **apply** by completing the form below and attaching the following documents:

- a. A complete CV and academic record
- b. A motivation letter is also recommended

The **deadline** for applications is **29/02/2024**.

*NOTES:*

*(i) All applicants will receive an answer after the end of the selection process; but please note that due to the large number of submissions that are expected, we cannot provide individual feedback.*

*(ii) Additional information about nanoGUNE's commitment towards [HR excellence in Research and Gender Equality](#) are available on our website.*

*(iii) We encourage you to subscribe to our [HR mailing list](#) to receive information related to nanoGUNE's open positions and open calls for different training and talent attraction programs.*