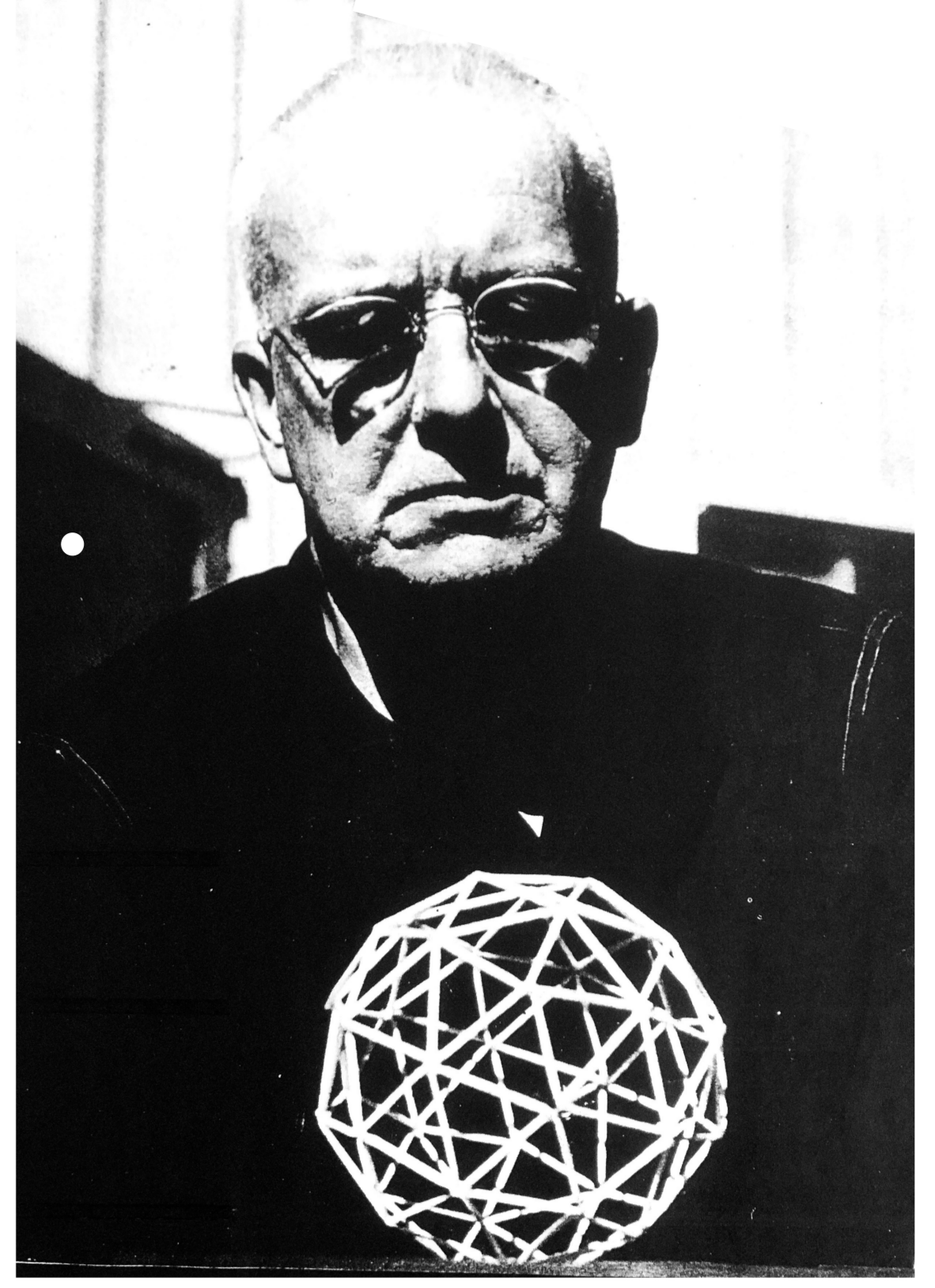




# Remote control of Bits in Buckies

Aram Kostanyan (Diss. 2018), Roland Stania (Diss. 2016), Martin Morscher (Diss. 2011), Rasmus Westerström, Thomas Greber



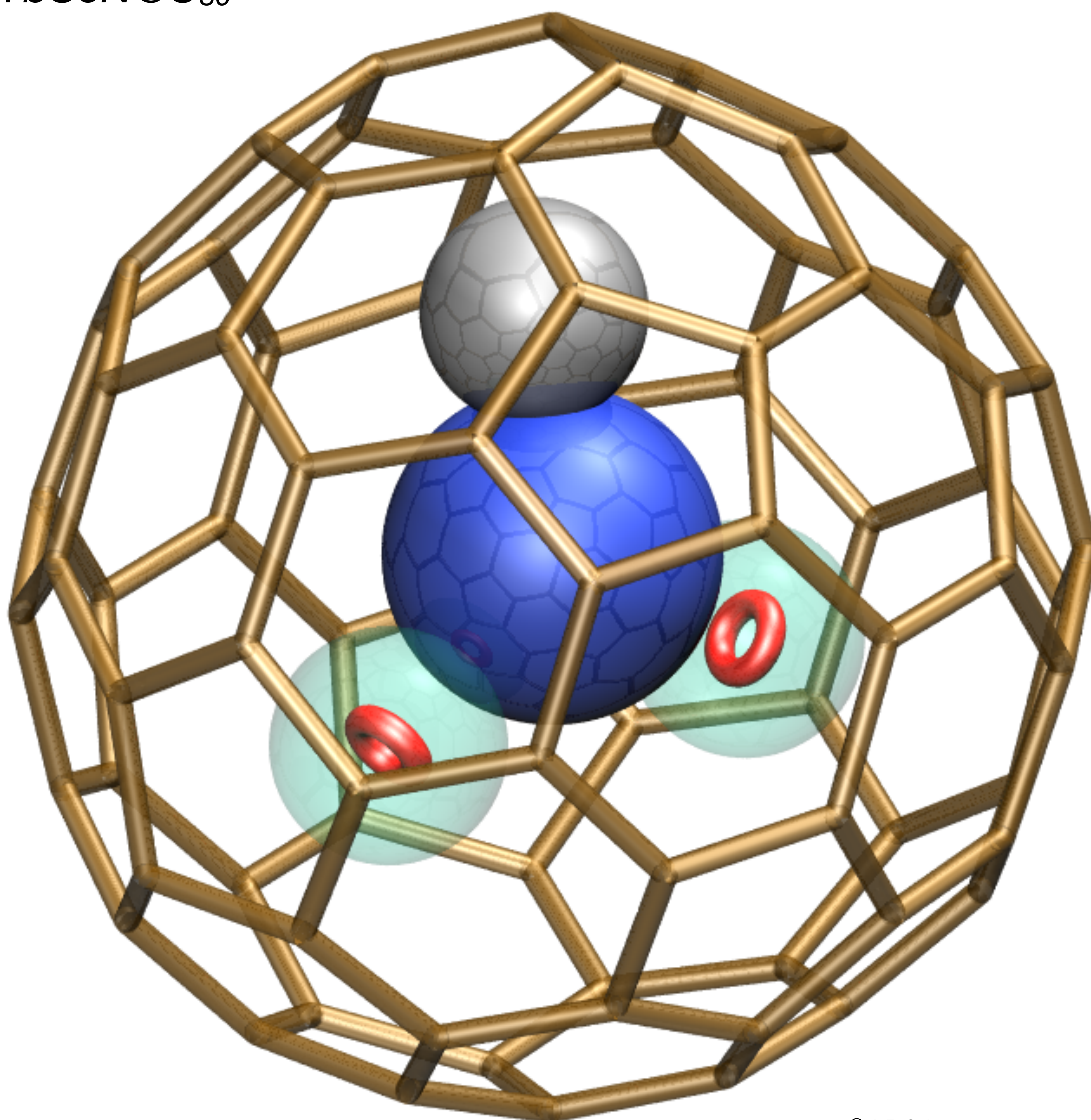
Richard Buckminster Fuller (1895-1983)

In collaboration with Matthias Muntwiler, PSI, Alexey A. Popov, IFW Dresden, Shangfeng Yang, USTC Hefei

Goal: control of the wave function

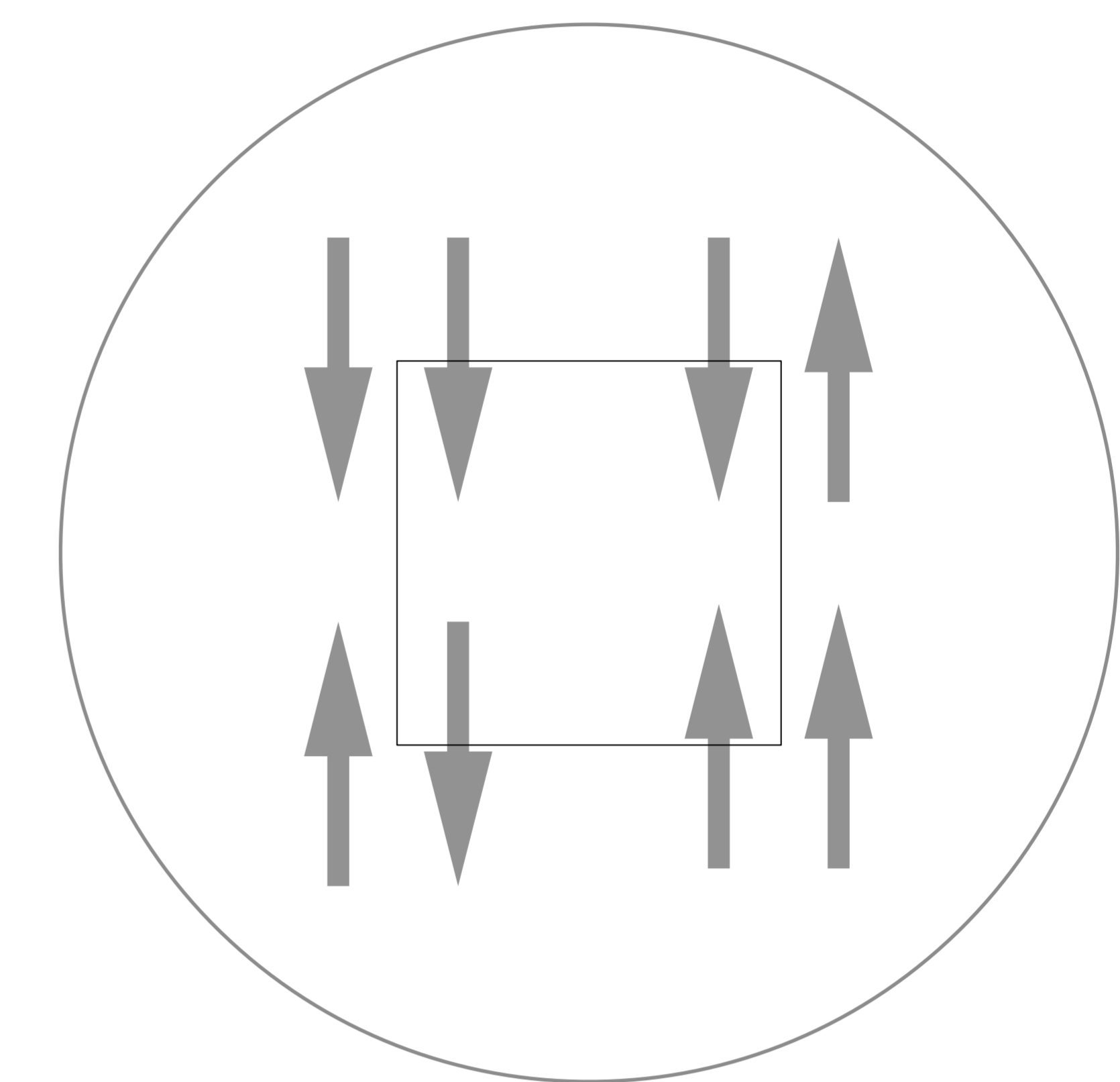
$\Psi$

e.g.  $TbScN@C_{80}$

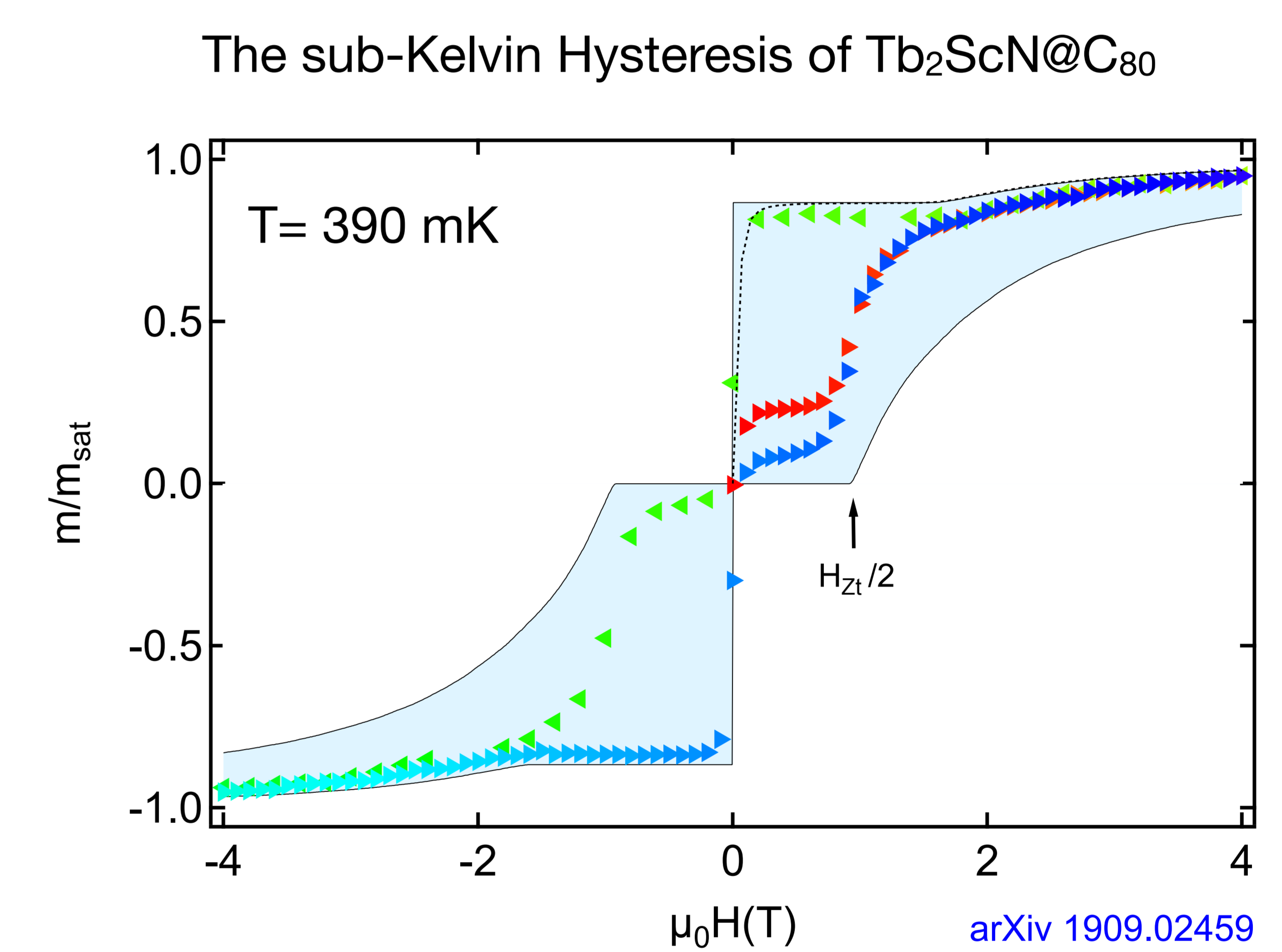


real space

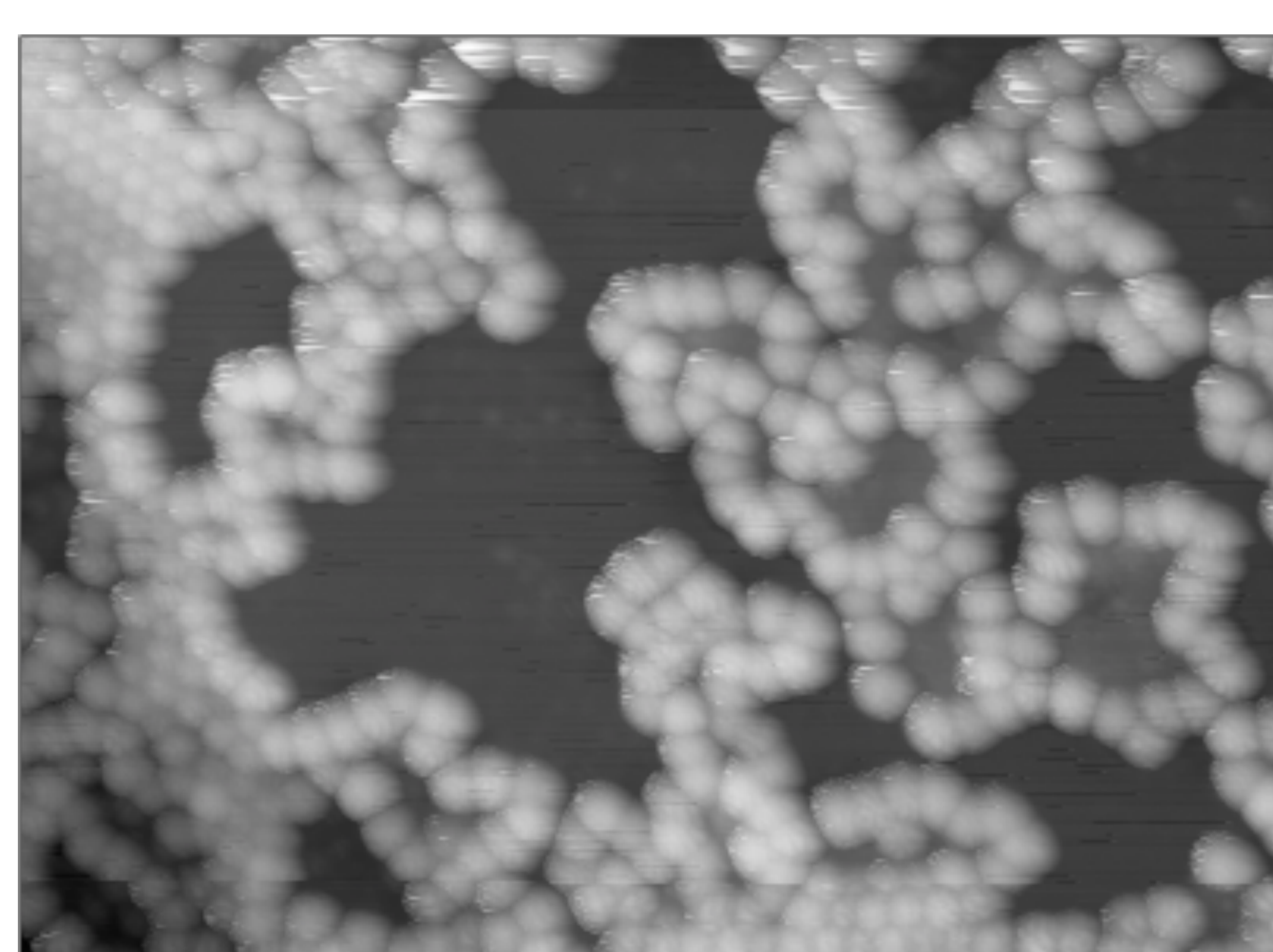
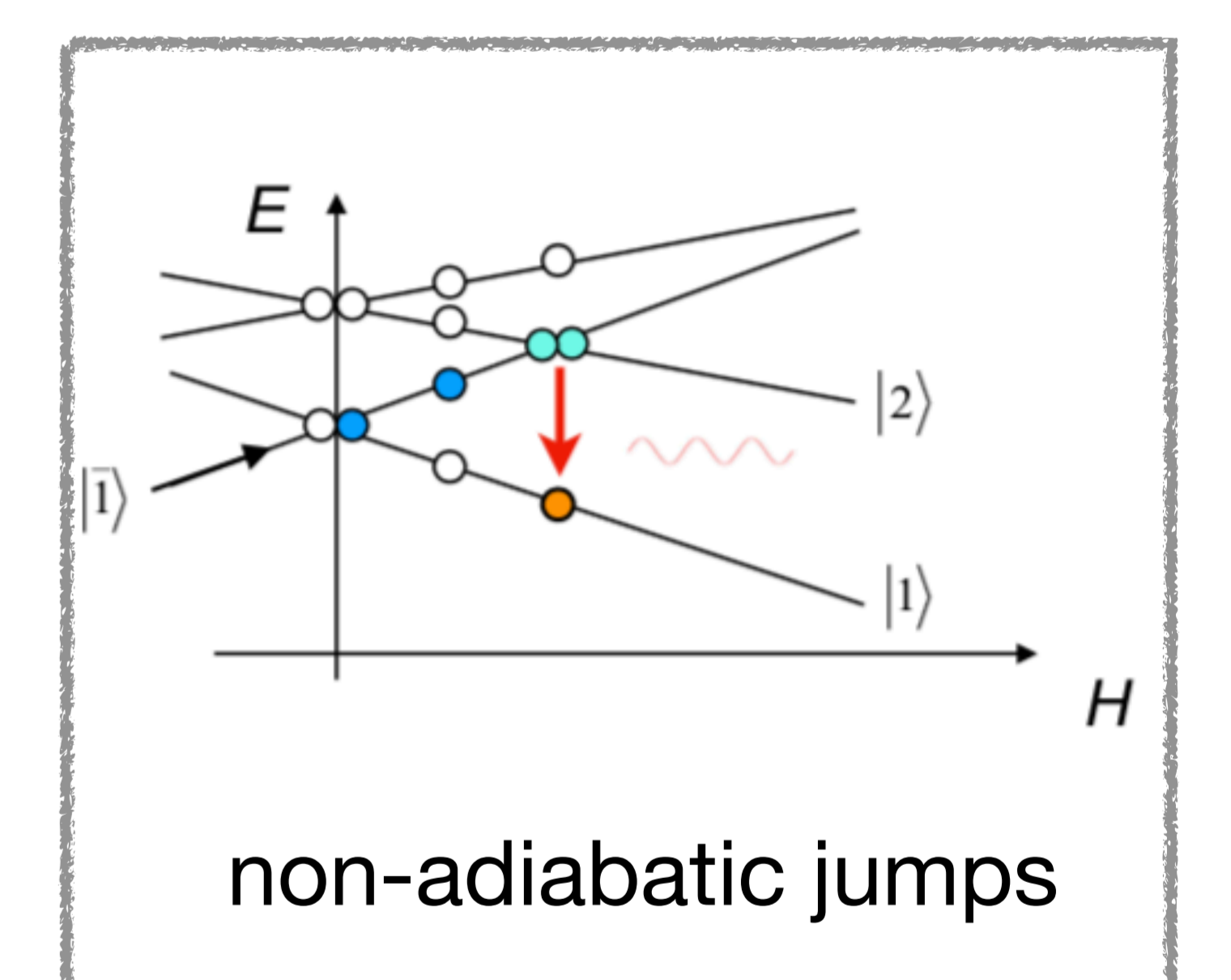
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Hilbert space



mechanism



STM image of  $TbSc_2N@C_{80}$  molecules on  $Cu(111)$ .  
N. Bachellier, 2019 PSI

Projects:

- optical access of the 4f shell(s)
- change of the molecular conformation on a gate of a field effect transistor