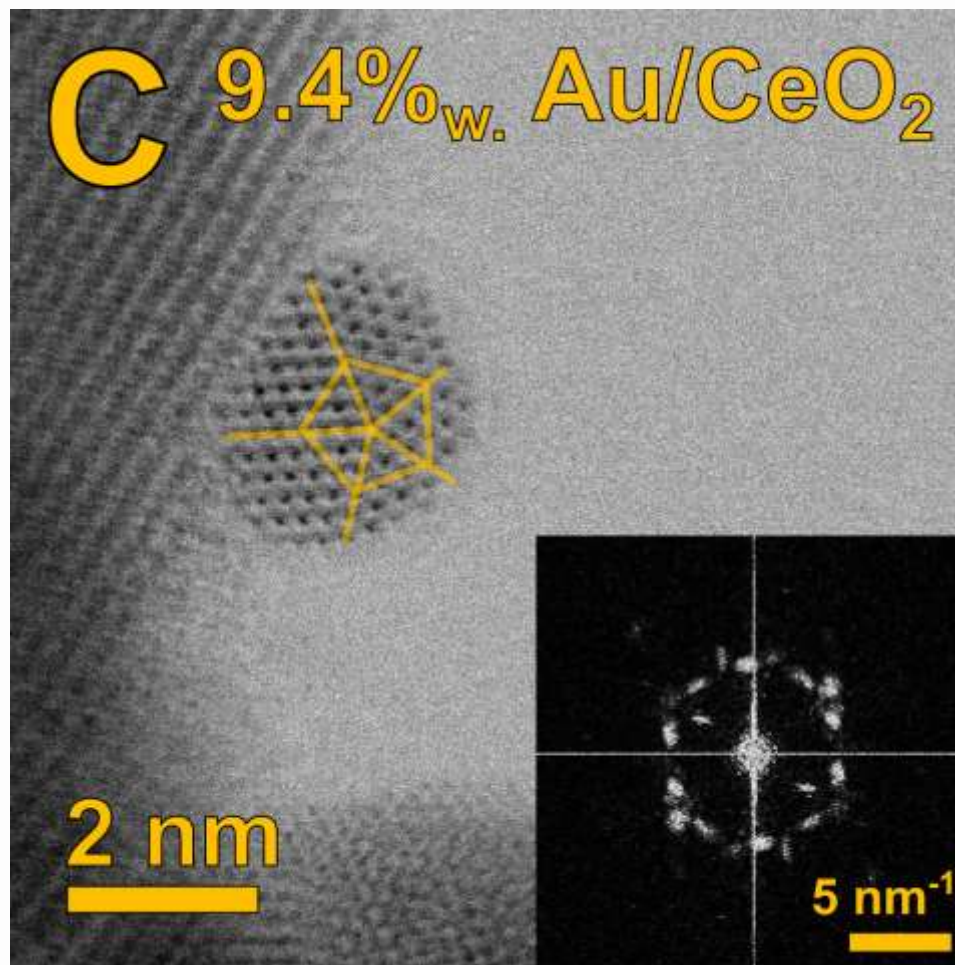
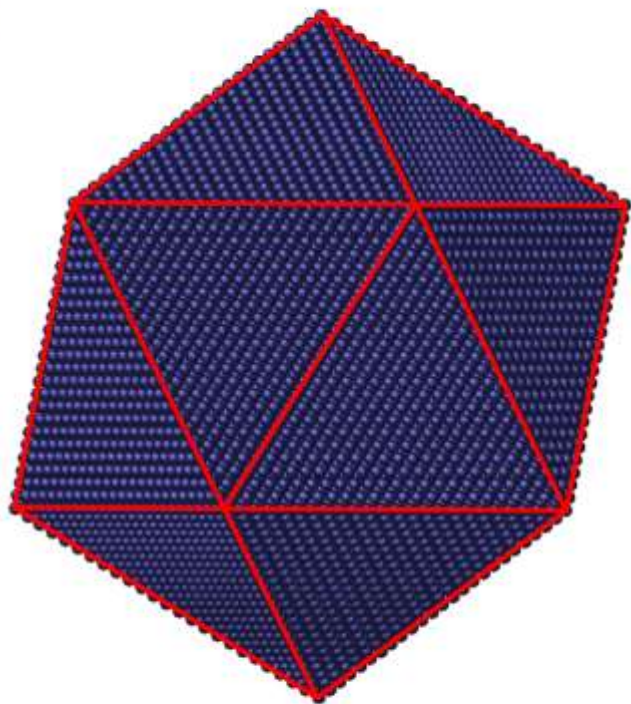


Au Multi-Twinned Particles (MTPs) / Quasicrystals



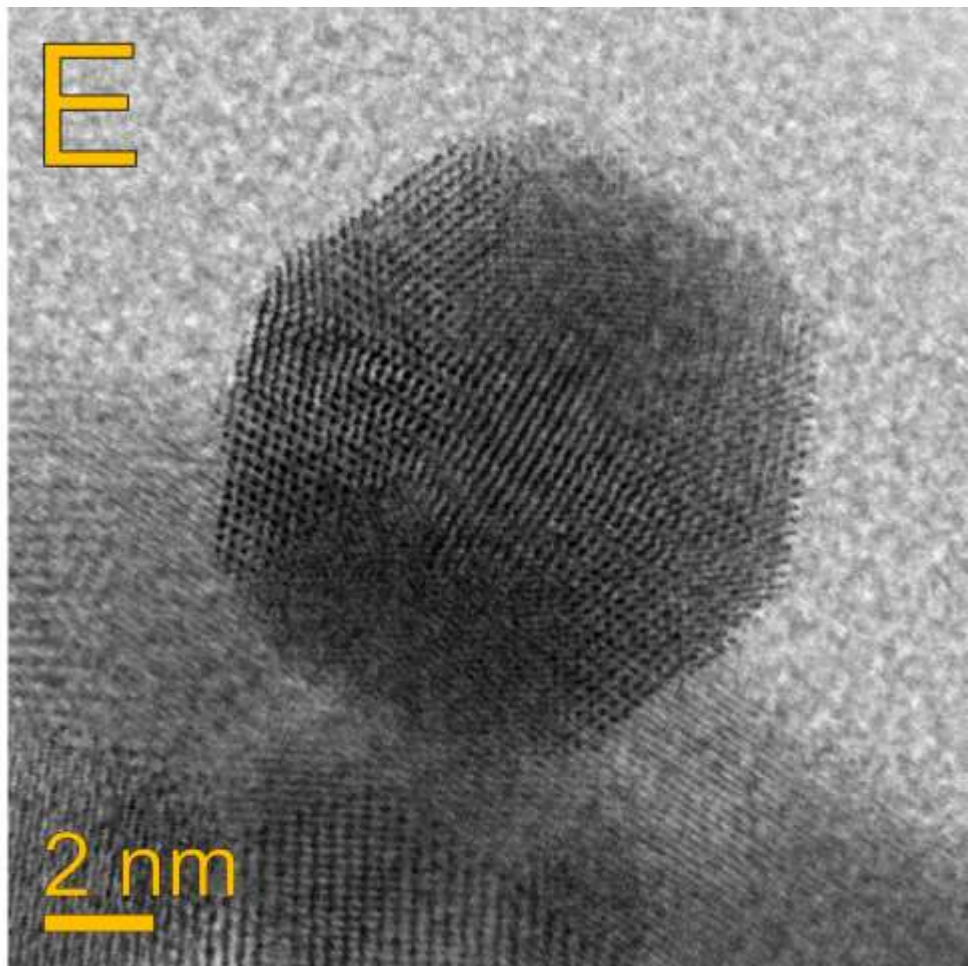
Au Multi-Twinned Particles (MTPs) / Quasicrystals

D



2 nm

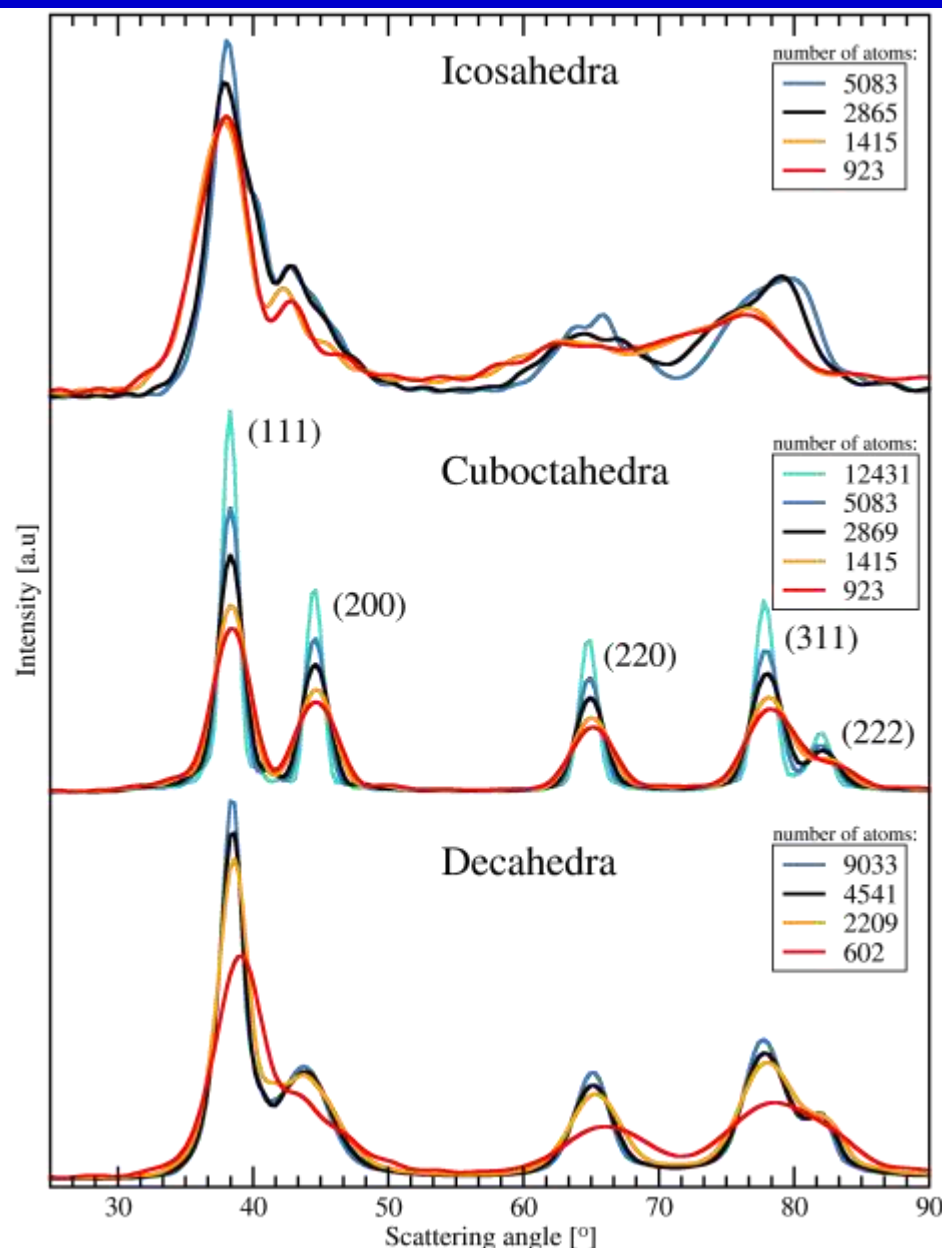
E



2 nm



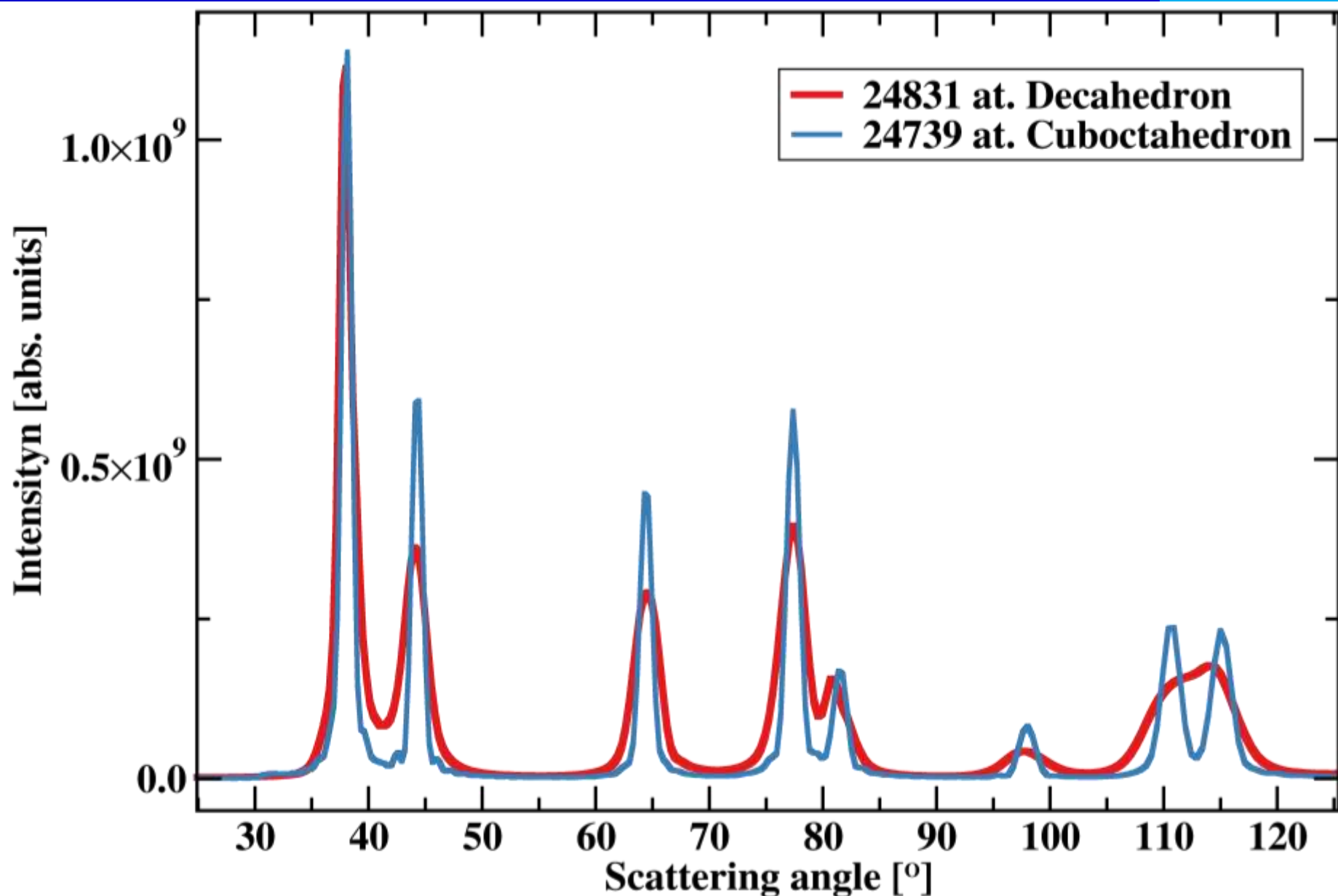
Scattering profiles of AuNPs



**Debye scattering equation
(summation formula):**

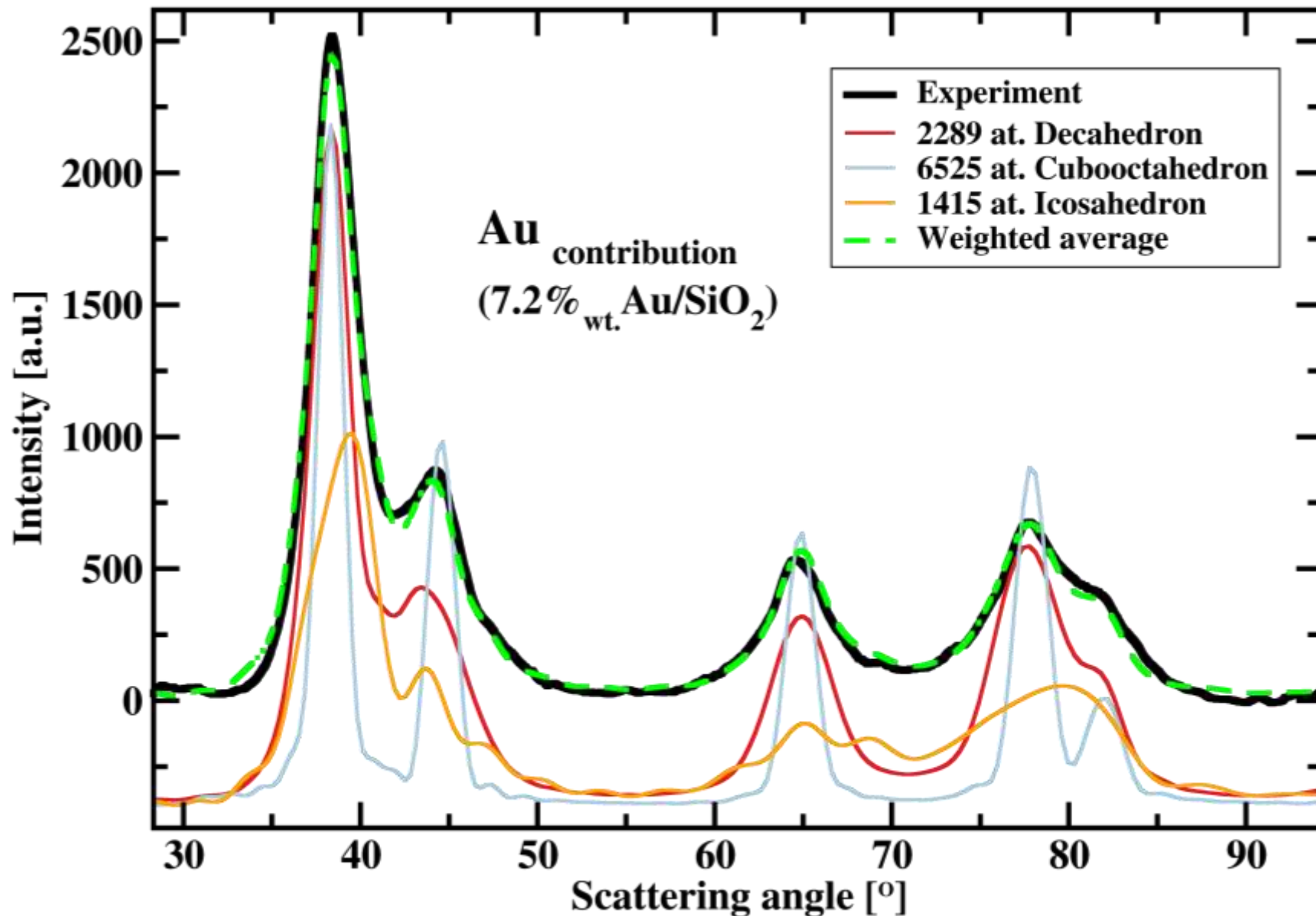
$$I_{eu} = \sum_m \sum_n f_m f_n \frac{\sin kr_{mn}}{kr_{mn}}$$


Scattering profiles of large D-h and C-h






Attempt to reconstruct the Au crystals phase






Description of **the influence of gold on the properties** of the whole catalytic system – **activation of H_2 and O_2** .





New insight into the role of the catalyst's support in the chemical reaction and its behaviour during adsorption of gases – H_2 and CO .



Detection of the presence of gold nanoparticles posing **5-fold symmetry axes**: decahedral and icosahedral crystals.

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THANK YOU !
Questions welcomed!