



F. SATO LAB.

[Innovative Simulation of Bio and Nano Molecules]

Center for Research on Innovative Simulation Software

Computational Biomolecular Science

Mechanical Engineering department

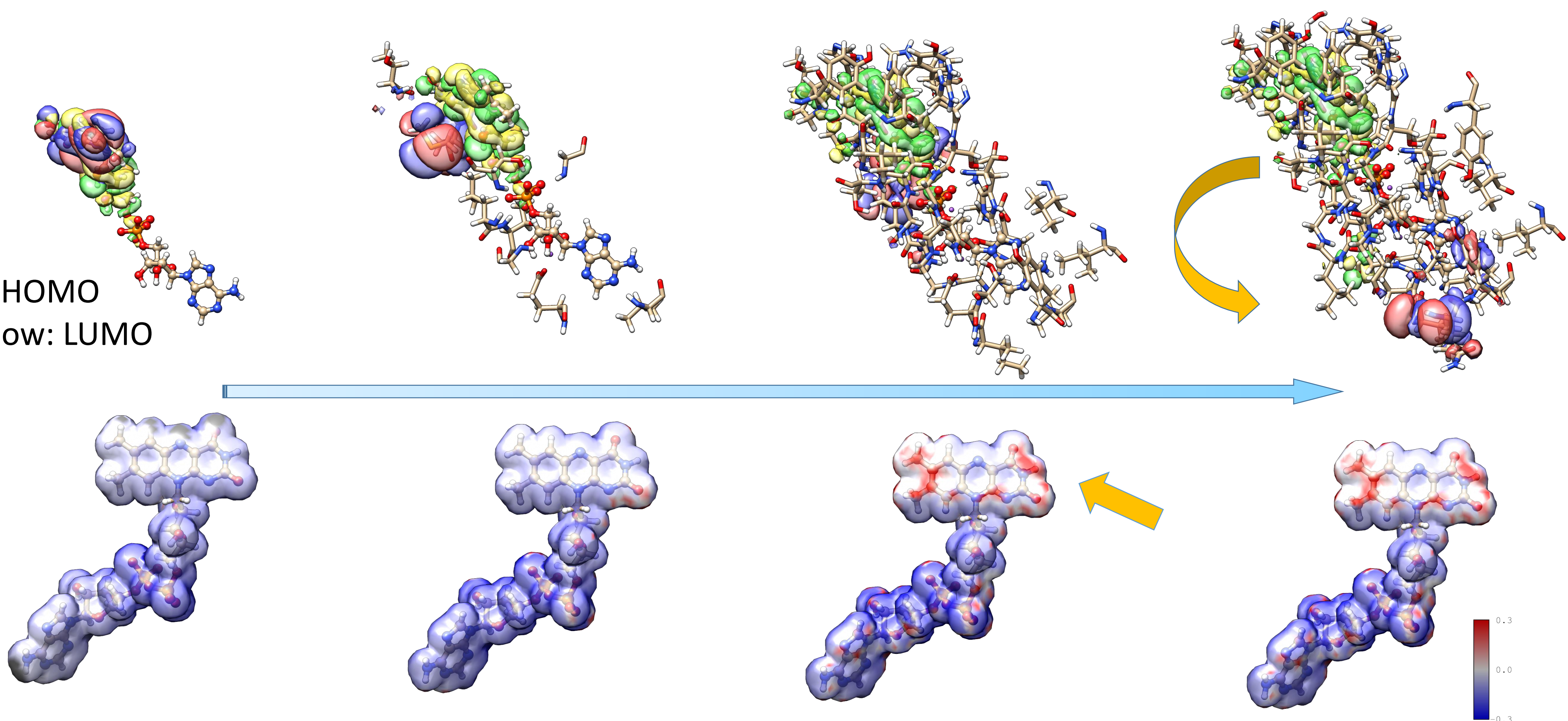
<http://www.ciss.iis.u-tokyo.ac.jp>, <http://satolab.iis.u-tokyo.ac.jp>

Large-Scale Canonical Molecular Orbitals Study

Has Great Potential in Shaping the Future.

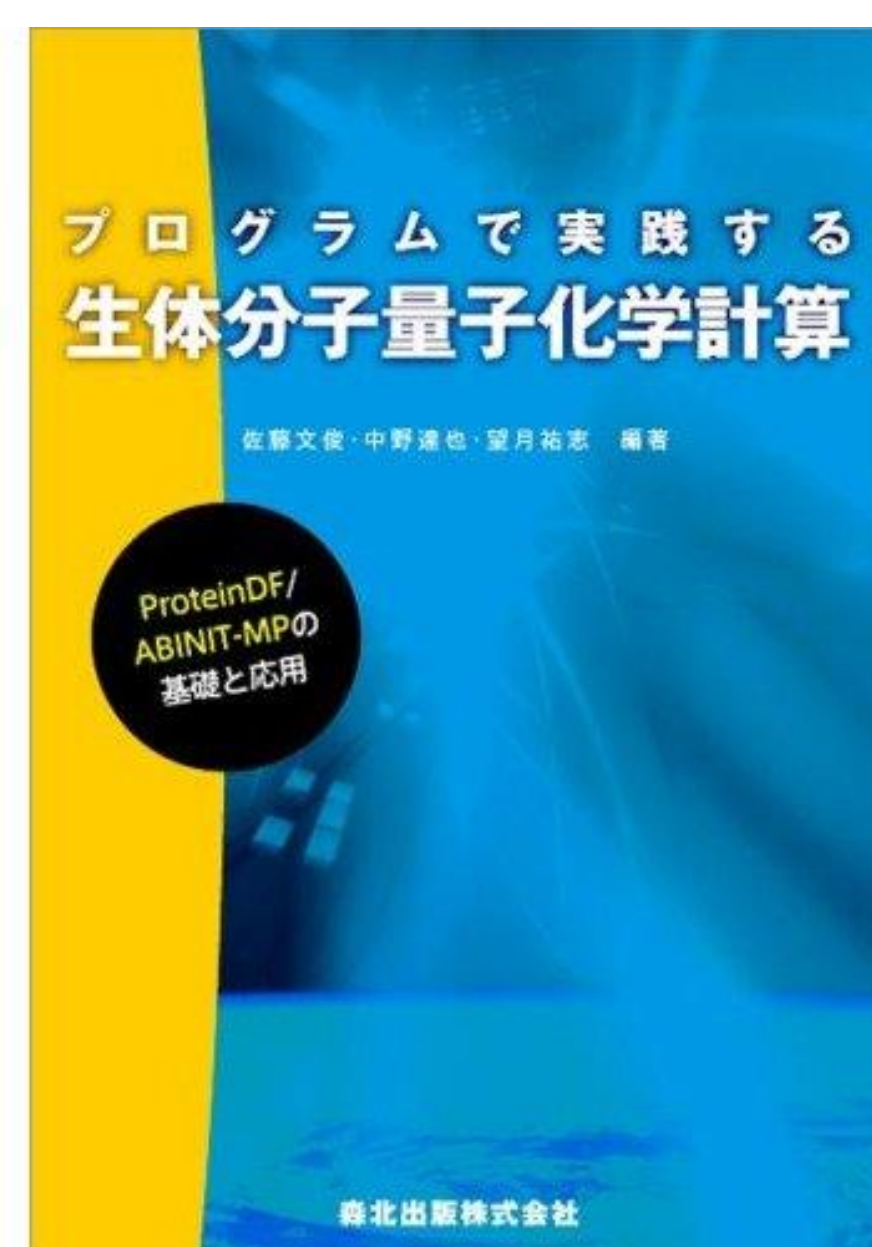
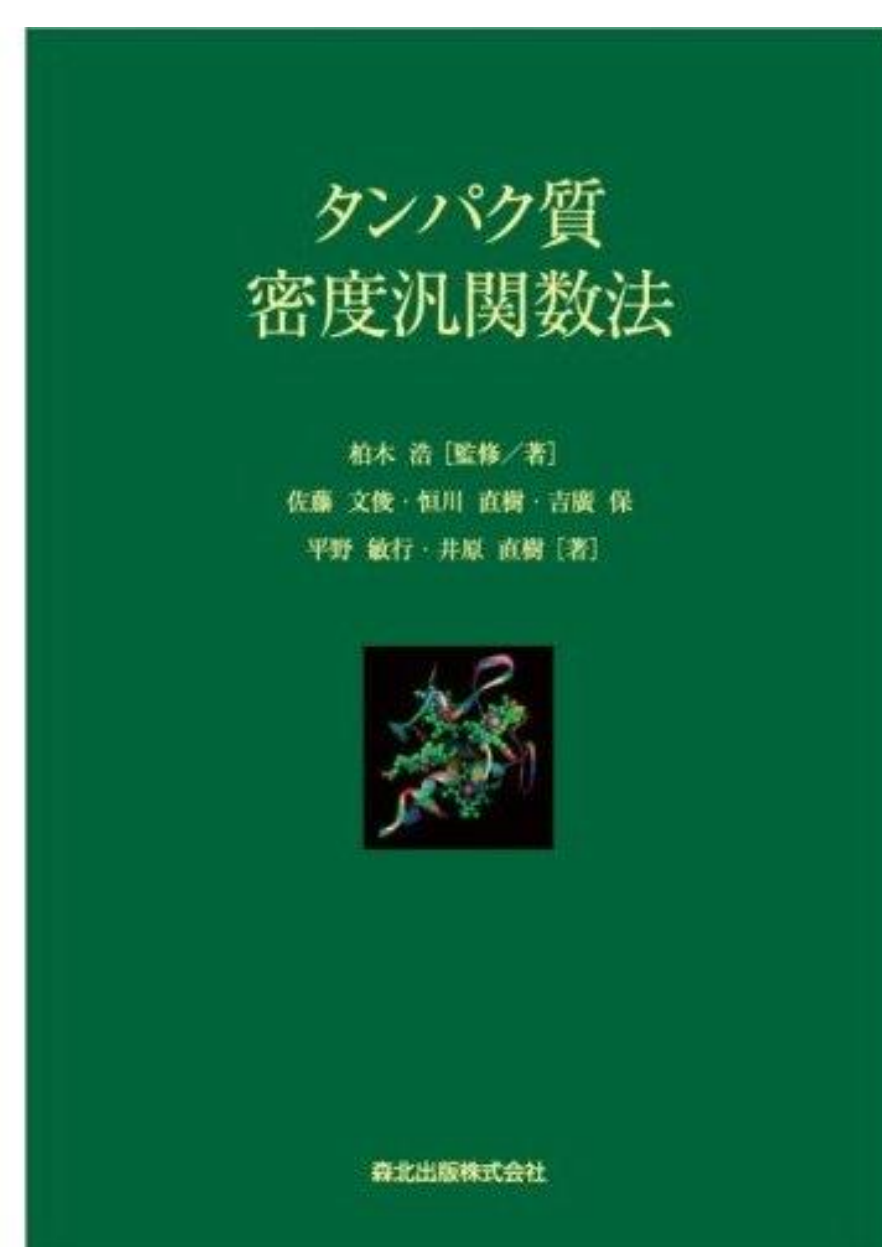
The new quantum chemical calculation software “ProteinDF” has been developed, where **canonical molecular orbitals of all electrons** of nanoscale molecules such as proteins are computable. <https://github.com/ProteinDF/>

MO:
Blue, Red: HOMO
Green, Yellow: LUMO



The ESP mapped on the active center (FAD) surface

Typical Roles of Electrons in Protein



Textbooks (Japanese)