Inventory of experimental and theoretical resources available for NanoSpace COST Action	
Country:	France
Name of Institution/Laboratory:	IMN (Institute of Materials Nantes), Nantes University / CNRS
Contact information (name, e-mail):	Chris ewels chris.ewels@cnrs-imn.fr
Website:	www.cnrs-imn.fr
Short description **(max 0.5 page)** of available techniques (experiment or theory): If appropriate, please include 1 picture/figure and caption highlighting resources.	Primarily computational (DFT, LAMMPS, xTB, …), local computing cluster and access to regional mesocentre GLiCID. Also HRTEM/EELS/EDX facilities and extensive vibrational spectroscopy (IR, Raman, UV-Vis, multiple wavelength lasers).
Sample/target description (e.g. gas, clusters, solid,…):	Calculations of small fullerenes
How to access to experimental/computational resources (e.g. through collaboration, user facility proposal calls,….):	Collaboration
References **(max 5)**:	Complete list here: https://chrisewels.github.io/ewels.info/science/publications/byyear.html *'Methodological Investigation for Hydrogen Addition to Small Cage Carbon Fullerenes'* Y. Tanuma, T. Maekawa, C. P. Ewels* MDPI Crystals, 11(11), 1334 (2021) (includes downloadable small fullerene xyz structure library) *'Simulated Raman spectra of bulk and low-dimensional phosphorus allotropes'* A. Impellizzeri, A. A. Vorfolomeeva, N. V. Surovtsev, A. V. Okotrub, C. P. Ewels*, D. V. Rybkovskiy* Phys. Chem. Chem. Phys., 23, 16611-16622 (2021) (a 2021 PCCP Hot Articles) *'Crystalline functionalized endohedral C_{60} metallofullerides'* A. Nakagawa, M. Nishino, H. Niwa, K. Ishino, Z. Wang, H. Omachi, K.

	Furukawa, T. Yamaguchi, S. Bandow, J. Rio, C. Ewels, S. Aoyagi, H. Shinohara Nature Communications, **9**, 3073 (2018) *'Spectromicroscopy of C60 and azafullerene C59N: Identifying surface adsorbed water'* D. Erbahar, T. Susi, X. Rocquefelte, C. Bittencourt, M. Scardamaglia, P. Blaha, P. Guttmann, G. Rotas, N. Tagmatarchis, X. Zhu, A. P. Hitchcock, C. P. Ewels*, Nature Scientific Reports, **6**, 35605 (2016) (press coverage in French and Turkish) *'Closed network growth of fullerenes'* P. W. Dunk, N. K. Kaiser, C. L. Hendrickson, J. P. Quinn, C. P. Ewels, Y. Nakanishi, Y. Sasaki, H. Shinohara, A. G. Marhsall, H. W. Kroto Nature Communications 3, 856 (2012) (covered in Chemistry World, "Buckyballs grow by gobbling carbon")