TWO-LEVEL STOCHASTIC SEARCH OF LOW-ENERGY CONFORMERS FOR MOLECULAR SPECTROSCOPY: IMPLEMENTATION AND VALIDATION OF MM AND QM MODELS.

Electronic Supplementary Information

Balasubramanian Chandramouli^{1,2}, Sara Del Galdo², Marco Fusè², Vincenzo Barone^{2,3}, Giordano Mancini^{2,3,*}

¹Compunet, Istituto Italiano di Tecnologia (IIT), Via Morego 30, I-16163 Genova, Italy ²Scuola Normale Superiore di Pisa, Piazza dei Cavalieri 7 I-56126, Pisa, Italy ³Istituto Nazionale di Fisica Nucleare (INFN) sezione di Pisa, Largo Bruno Pontecorvo 3, **56127 Pisa, Italy**



Figure S1. (A) Comparison of L-Thr conformers identified by the cheap schemes and previous systematic approach². Shaded portion highlight the low-lying structures within 15 kJ.mol⁻¹. The values in parenthesis indicate the total number of DFT optimizations. **(B)** L-Thr low-lying structures located with DFTBA model through standard and restarts samplings utilizing the worst conformer. Shading highlights low-lying states



Figure S2. Ferrocene derivative conformer search. Distribution of relative energies and heavy atom RMSD of accepted structures. ^aSampling without single point estimations. Values in parenthesis indicate population size of accepted structures.