

VTX: High-performance molecular structure and dynamics visualization software

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VTX is a high-performance molecular visualization software capable to handle most molecular structures and dynamics trajectories file formats. It features a real-time high-performance molecular graphics engine that uses only analytical representations which allows pixel perfect quality rendering of massive molecular scenes with reduced memory usage [1]. Thanks to this engine, VTX handles massive molecular systems (several hundred million atoms) and massive molecular dynamics trajectories (microseconds of several million atoms). VTX integrates an interactive camera system that includes free-fly navigation and a fully modular graphical user interface designed for maximal usability. VTX design is focused on performance and usability for research, teaching and educative purposes. It is open source, free for non commercial use, and available on Linux and Windows at <http://vtx.drugdesign.fr> and <https://github.com/VTX-Molecular-Visualization>

[1] Plateau-Holleville C, Maria M, Merillou S, Montes M. Efficient GPU computation of large protein Solvent-Excluded Surface. IEEE Trans Vis Comput Graph, 2024

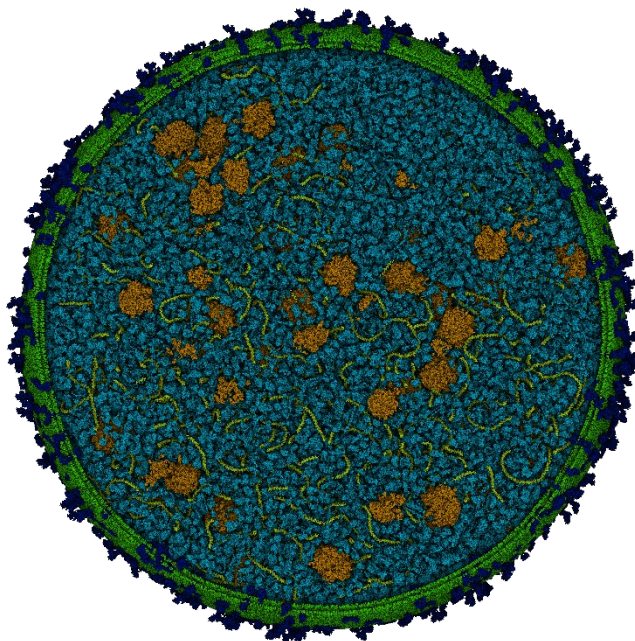


Figure 1. Illustration of a whole cell mycoplasma system of 560 million martini beads rendered with VTX O.4.1.