The POCOBIO database: a database for computed scattering cross sections for positron collisions with biomolecular systems

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The design of a database for positron interactions with biomolecular systems is outlined. The database contains only scattering cross sections, which are derived from theory. The data model is defined in a very flexible way, which facilitates its usage as a repository for weakly bound clusters of molecules and molecular systems with many tautomeric forms. The focus on theoretical data allows to have a consistent set of data. The database should fulfill following purposes:

- work as a repository for cross section data,
- allow easy access to published data so, that the data can be used in computer program packages for simulation of positron tracks,
- provide benchmark data for other calculations and for experimentalists,
- and provide differential cross sections, which allow experimentalists to correct experimentally obtained integral cross sections.