

## Computing Some Topological Descriptors of Single-Walled Carbon Nanotubes

**Authors :** Amir Bahrami

**Abstract :** In the fields of chemical graph theory, molecular topology, and mathematical chemistry, a topological index or a descriptor index also known as a connectivity index is a type of a molecular descriptor that is calculated based on the molecular graph of a chemical compound. Topological indices are numerical parameters of a graph which characterize its topology and are usually graph invariant. Topological indices are used for example in the development of quantitative structure-activity relationships (QSARs) in which the biological activity or other properties of molecules are correlated with their chemical structure. In this paper some descriptor index (descriptor index) of single-walled carbon nanotubes, is determined.

**Keywords :** chemical graph theory, molecular topology, molecular descriptor, single-walled carbon nanotubes

**Conference Title :** ICGHOST 2020 : International Conference on Ghost Conference

**Conference Location :** ghost city, Other

**Conference Dates :** December 12-13, 2020