Atom bond connectivity index of molecular graphs of alkenes and cycloalkenes

ABSTRACT

The atom-bond connectivity (ABC) index is one of the recently most investigated degree based molecular structure descriptors that have applications in chemistry. For a graph G, the ABC index is defined as $ABC(G) = \sum_{uv \in E(G)} \sqrt{[d_v + d_u - 2]/[d_v \cdot d_u]}$, where d_u denotes the degree of a vertex u in G. In this paper, we establish the general formulas for the atom bond connectivity index of molecular graphs of alkenes and cycloalkenes.

Keyword: Alkenes and cycloalkenes; Atom bond connectivity index; Molecular graphs