

## On the atom bond connectivity index of certain trees and unicyclic graphs

### 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  $ABC(G) = \sum_{uv \in E(G)} (\deg(u) + \deg(v) - 2)$ , where  $\deg(u)$  denotes the degree of a vertex  $u$  in  $G$ . In this paper, we obtain the general formula of the ABC index for certain trees and unicyclic graphs with their representing by Alkanes and Cycloalkanes.

**Keyword:** ABC index; Alkanes; Cycloalkanes; Trees; Unicyclic graph