Cruz, Roberto; Rada, Juan; Sigarreta, José M.
Sombor index of trees with at most three branch vertices. (English) Zbl 07425030

Summary: Let $G$ be a graph with set of vertices $V(G)$ and set of edges $E(G)$. The Sombor index is a vertex-degree-based-topological index recently introduced by I. Gutman [“Geometric approach to degree-based topological indices: Sombor indices”, MATCH Commun. Math. Comput. Chem. 86, No. 1, 11–16 (2021)], defined as

$$
SO(G) = \sum_{uv \in E(G)} \sqrt{(d_u)^2 + (d_v)^2}.
$$

In this paper we determine the extremal values of $SO$ over trees with at most three branch vertices.

MSC:
05C09 Graphical indices (Wiener index, Zagreb index, Randić index, etc.)
05C92 Chemical graph theory

Keywords:
Sombor index; extremal values; trees; branch vertices

Full Text: DOI

References:
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