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ON CORRELATION OF PHYSICOCHEMICAL PROPERTIES AND THE HYPER ZAGREB INDEX FOR SOME MOLECULAR STRUCTURES

Keerthi G. Mirajkar, Bhagyashri R. Doddamani* and Huchesh H. B.**

Department of Mathematics,
Karnatak University's Karnatak Arts College,
Dharwad - 580001, Karnataka, INDIA

E-mail : keerthi.mirajkar@gmail.com

*Department of Mathematics,
Faculty of Engineering and Technology,
Jain (Deemed-to-be-University) Banglore - 562112, Karnataka, INDIA

E-mail : bhagyadoddamani1@gmail.com

**Department of Mathematics,
Karnatak University's Karnatak Science College,
Dharwad - 580001, Karnataka, INDIA

E-mail : hhbudihal17@gmail.com

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Abstract: In this article, the physico-chemical properties of octane isomers such as entropy, acentric factor, enthalpy of vaporization (HVAP) and Heat of fusion (DHVAP) are tested by using hyper Zagreb index $HM(G)$. Here we show that the hyper Zagreb index has a great correlation with these chemical properties and observe that the index $HM(G)$ highly correlates with acentric factor. Further, we also establish the results on bounds for $HM(G)$ interms of order and size of a graph G. Also, we compute the results of $HM(G)$ for Fractal and Cayley tree type dendrimers.

Keywords and Phrases: First Zagreb index, hyper Zagreb index.