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TRACKING TRENDS & PERFORMANCE IN BASIC RESEARCH

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2008 : June 2008 : Bo Zhou

EMERGING RESEARCH FRONTS - 2008

June 2008



Bo Zhou talks with *ScienceWatch.com* and answers a few questions about this month's Emerging Research Front Paper in the field of Mathematics.



Article: Minimal energy of bipartite unicyclic graphs of a given bipartition

Authors: Li, F; Zhou, B

Journal: MATCH-COMMUN MATH COMPUT CHEM, 54 (2): 379-388 2005

Addresses: S China Normal Univ, Dept Math, Guangzhou 510631, Peoples R China.

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SW: Why do you think your paper is highly cited?

I think one reason is that, prior to our article, there seemed to have been only one previous paper which focused on the energy of unicyclic graphs. Before this, people had not yet classified the group of unicyclic graphs examined in this paper.

SW: Does it describe a new discovery, methodology, or synthesis of knowledge?

It describes some new results, mainly which bipartite unicyclic graphs of a given bipartition achieve minimal energy.

SW: Would you summarize the significance of your paper in layman's terms?

The energy of a graph is defined as the sum of the absolute values of all the eigenvalues of the graph. In this paper, we characterize the graphs with minimal energy in the class of bipartite unicyclic graphs (representing molecules), of a given (p,q) -bipartition, where $q = p = 2$.

SW: How did you become involved in this research and were any particular problems encountered along the way?

The authors considered some special classes of graphs, e.g., trees, prior to beginning this research.

SW: Where do you see your research leading in the future?

Toward determining the extremes of energy for various classes of graphs of chemical interest, even that of other graph descriptors

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Keywords: unicyclic graphs, bipartite unicyclic graphs, graph descriptors.

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