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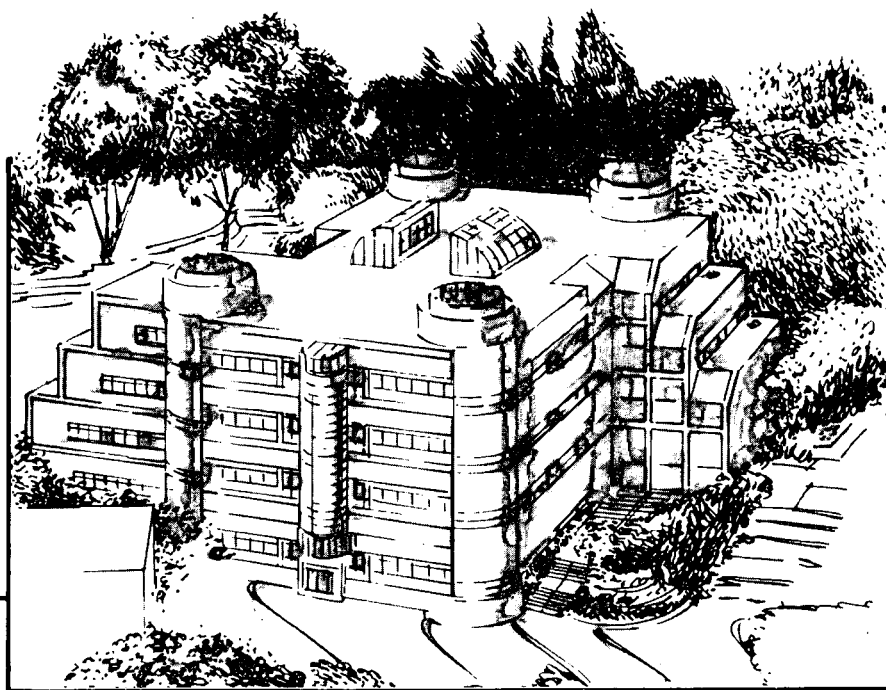
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H. Heinemann and G.A. Somorjai

March 1991



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QUARTERLY REPORT

February 1, 1991 - March 31, 1991

**CONVERSION OF ETHANE AND OF PROPANE
TO HIGHER OLEFIN HYDROCARBONS**

Principal Investigators: Heinz Heinemann
Gabor A. Somorjai

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I. Task Description for FY 1991

It is the purpose of this work to extend recent findings of oxidative methane coupling to the coupling of paraffinic hydrocarbons such as ethane and propane to produce C₄ respectively C₆ and higher hydrocarbons. Variables which have been shown to influence the olefin/paraffin ratio of the product will be investigated to optimize olefinic products. A study of the reaction mechanisms is to be undertaken on the basis of which improved catalysts will be synthesized.

II. Highlights

No experimental work on this project has yet been undertaken. Funding for the project was received in February, 1991, and a postdoctoral fellow has now been hired to carry out work on this project. He is expected to report for work in May of this year. In the meantime, ethane and propane gas have been ordered and some equipment modifications have been undertaken to permit start of experimental work as soon as possible.

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