

Research by Interinstitutional Network - the model of Catalysis Net – RECAT

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The Catalysis Network – RECAT, defined as an Inter-Institutional Program for the Development of Catalytic Processes, is organized as a network in continuous operation, allowing for the aggregation of new institutions, researchers, collaborators and consultants. The RECAT studies the science of catalysis, which is multifaceted and focus on petroleum, natural gas, petrochemical products, alternative sources of energy production and environmental conservation. The research focuses on the synthesis, development, characterization and evaluation of catalysts and adsorbents, the modeling and simulation of reactions and the optimization of catalytic processes. The main technological differentiation in the industrial processes lies on the catalyst. The catalyst reactor, which is the “heart” of the process, represents the most significant technological obstacle and the source of our dependence on foreign technology.

The network comprises more than sixty Ph.D. researchers, twenty-two laboratories and several undergraduate and graduate students of eighteen universities located in the Northeastern region of the country. In addition, several companies, factories and government funding institutions are partners to the network. Among them, Petrobras, Braskem, Oxiteno, FAPESB, FINEP and CNPQ can be singled out. The companies taking part in the RECAT seek improvements in the production processes, quality, competitiveness and environmental-friendly initiatives for their industrial units.

The organization of RECAT’s activities occurs with the use of management mechanisms developed specifically for cooperative research networks, and the results are presented through the issuance of patents and publications in several outlets. In addition, the results arise from the presentation of technology products, such as catalysts prepared and used in the industries, their characterization, catalytic tests of commercial catalysts and modeling, among other scientific and technologic results. In the academic realm, besides the publication in scientific journals, the network is also of great importance in the formation of human resources.

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