

## ***In-situ* AND POST-SYNTHESIS CONTROL OF ZEOLITE PROPERTIES**

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Molecular sieve zeolites are widely used as heterogenous catalysts in a variety of industrial (refining, petro- and fine chemicals,..) and environmental applications. Advancements in synthesis have been invaluable in expanding the zeolitic materials to new unique framework types and compositions, motivating innovative developments. At present, 248 framework types are available, but a few of them reached the industrial use. The limited number of zeolite structures employed in industrial processes is due to the stringent requirements that a particular zeolite should face in order to meet industrial scenarios. The physicochemical properties of a zeolitic material are imperative for a particular application, but the weight of economic, environmental, and production issues is equally important in taking the final decision. Among the critical factors that determine the choice of microporous material for a particular application is the ability of zeolite to undergo in-situ and post-synthesis modifications.

The objective of the present talk is to review the recent developments in in-situ and post-synthesis methods of physicochemical properties control as the examples are based on industrial relevant zeolites. The advantages and disadvantages of in-situ and post-synthesis methods of control of zeolite properties will also be addressed.