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**Ilie Grigorescu** ([igrigore@math.miami.edu](mailto:igrigore@math.miami.edu)), Department of Mathematics, University of Miami, Coral Gables, FL 33146, and **Min Kang\*** ([kang@math.ncsu.edu](mailto:kang@math.ncsu.edu)), Department of Mathematics, North Carolina State University, Raleigh, NC 27695. *Stochastic Processes with Catalyst and Quasi-Stationary Distribution.*

A general class of stochastic processes with catalyst is considered. The process changes its behavior upon contact with a catalyst in the state space. Examples of such particle systems include so-called Fleming-Viot process on a bounded domain, Bak-Sneppen fitness evolution model and many others. In the Fleming-Viot case of the diffusions equipped with hard catalyst consisting of the boundary of the domain, the condition to prevent explosion of the processes is discussed. Also the connection between the limiting empirical measure associated with this particle system and the quasi-stationary distribution for the underlying process will be clarified. (Received January 16, 2014)