# Coating zeolite particles with $TiO_2$ by planetary ball milling

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In this study, the $TiO_2$ coating on zeolite particles was prepared by planetary ball milling for the first time. The surface and structure of $TiO_2$ thin film on zeolite particles were measured by XRD and SEM after coating. The evolution of coating layer was examined for different milling times. In the beginning of milling, nonuniform $TiO_2$ coating layer was formed on the surface of zeolite particles and, as the milling time increases more, uniform $TiO_2$ coating appeared and increased in its thickness. As the $TiO_2$ amount or the disk rotation speed increased, the thickness of $TiO_2$ uniform layer increased and the aggregated $TiO_2$ particles increased in size and became more spherical. This study will become the basic data for design to prepare several advanced coated materials by planeraty ball milling.