

Production of Acrylic Acid from Allyl Alcohol by Selective Oxidation Using Au/Ceria Catalysts

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Petroleum-based chemical productions raised an environmental problem regarding global warming by emitting CO₂ gas and had limitations based on the location of reservoir, mainly middle east, and the amount of crude oil. Therefore, there are many attempts for alternating the petroleum based chemical production. For example, electrical method and utilization of small molecular like carbon dioxide are on research. However, as more practical method, using biomass-derived chemical is appropriate for mass production in chemical production system. In this view, our group made an effort for production of acrylic acid. Acrylic acid is a monomer of super-absorbent polymer used in hygienic products and has many applications in chemical industry. In this research, production of acrylic acid was enhanced compared with previous researches and figured out the mechanism of producing acrylic acid.