

Low-temperature DeNO_x catalyst for reducing ultrafine particle emission

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SCR pilot DeNO_x reactor through on-site exhaust gas injection. Credit: Korea Institute of Science and Technology(KIST)

Recently, there has been growing demand for DeNO_x catalysts that can treat nitrogen oxides (NO_x) at low temperatures to increase energy

efficiency when processing flue gas in industrial combustion facilities. NO_x are emitted during the combustion of fossil fuels and are the leading cause of ultrafine particles (UFPs) formed via chemical reactions in the atmosphere.

However, existing catalysts have a problem of reduced durability due to the poisoning of the catalyst's active sites because of the formation of ammonium sulfate, when sulfur in [flue gas](#) reacts with reducing agent ammonia at a low temperature (

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