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Abstract

A process for preparing lactams by hydrolytic cyclization of aminonitriles in the gas phase in the presence of a metal phosphate catalyst comprises using
10 a catalyst comprising one or more oligophosphates of the general formula (I)



15 where M is a metal of group 3 or 4 of the periodic table, including the lanthanides, a is > 2.5 and < 4.0 , and b is such that electrical neutrality is ensured,

or a mixture of one or more oligophosphates of the
20 general formula (I) with one or more further salts of a metal of group 3 or 4 of the periodic table, including the lanthanides, with an inorganic acid.

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