

A process for the production of acetic acid by carbonylating methanol and/or a reactive derivative thereof in a carbonylation reactor in a liquid reaction composition comprising an indium carbonylation catalyst, methyl iodide, methyl acetate, water, acetic acid and at least one promoter selected from the group consisting of ruthenium, rhenium and osmium, characterised in that there is also present in the reaction composition a bis-phosphonate compound having the formula (I): wherein R^1 , R^2 , R^3 , R^4 are independently hydrogen or an organic functional group; Y is an optionally substituted C_1 - C_{10} alkylene or C_6 - C_{10} aryl group.

