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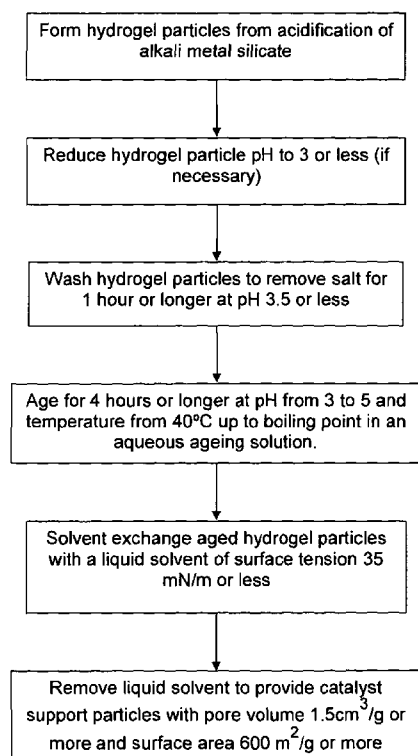
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(54) Title: CATALYST SUPPORTS, CATALYSTS AND THEIR MANUFACTURE AND USE

Figure 1



(57) **Abstract**: A process for preparation of silica xerogel catalyst support particles having high surface areas involves ageing a silica hydrogel at a pH from 3 to 5 and at a temperature of 45°C or more. The ageing at low pH leads to a silica gel which may be converted to a xerogel having a pore volume of 1.5 cm³/g or more and a surface area of 600 m²/g or more by removal of liquid from the pore structure by solvent exchange with a liquid solvent having a surface tension of 35 mN/m or less. The resulting particles are useful for carrying catalyst metal compounds, such as a chromium compounds, in the pore structure to act as catalyst precursors. These catalyst precursors may be activated into porous catalyst particles suitable for use for olefin polymerisation to provide high activity and for forming high molecular weight polymers (low MI polymers) with good crack resistance.



SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR,
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