



ISTITUTO ITALIANO  
DI TECNOLOGIA

## TITLE

Process For Producing Polymer Foams

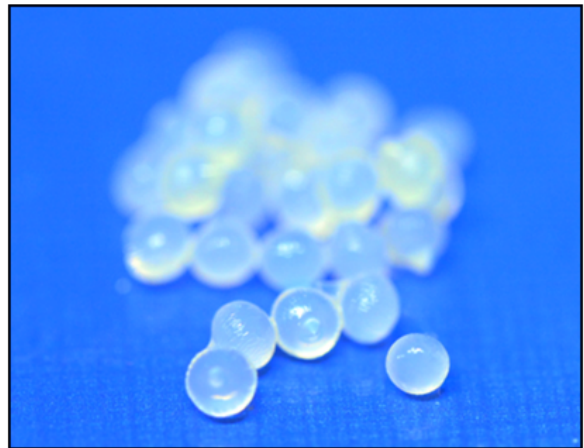
## INVENTORS

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## DESCRIPTION

Process for the production of a polymeric foam with use of hydrogel pearls as porosity generating template, comprising the steps of:

- providing a matrix of polymer or prepolymer in viscous state including, as a dispersed phase, hydrogel pearls, where said pearls are dispersed in said matrix so as to generate intercommunicating cells,
- causing the solidification of the matrix of polymer or prepolymer to obtain said polymeric foam including said hydrogel pearls, characterised in that it comprises the operation of subjecting the thus obtained foam to conditions which cause the dehydration of said hydrogel pearls so as to obtain a reduction of volume of said pearls,
- removing the dehydrated pearls by immersion in water of the polymeric foam or by exposure of the foam to a flow of pressurised gas.



## APPLICATIONS

Environmental protection field, environmental protection field, petro oil industries, electromagnetic shielding, electromagnetic shielding

## KEYWORDS

Sponge, polymer foam, sacrificial template, natural beads, alginate beads, hydrogel beads, nanoparticles

## BIBLIOGRAPHIC DATA

Procedimento per la produzione di spugne polimeriche

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