Abstract:

Deformable porous media have a variety of applications in geosciences, biological, and energy fields. In such a medium, the porosity of the medium may change due to deformation in response to pressure. Another reason is that of clogging due to the precipitation of solids on the pore surfaces. This may cause the flow. This leads to a change in the flow pattern.

We review some of the recent approaches to study deformable porous media. A system of coupled partial differential equations describe this phenomenon.