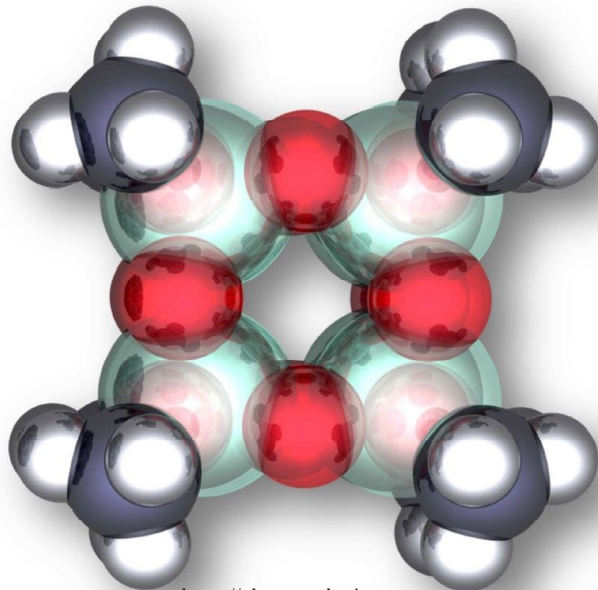


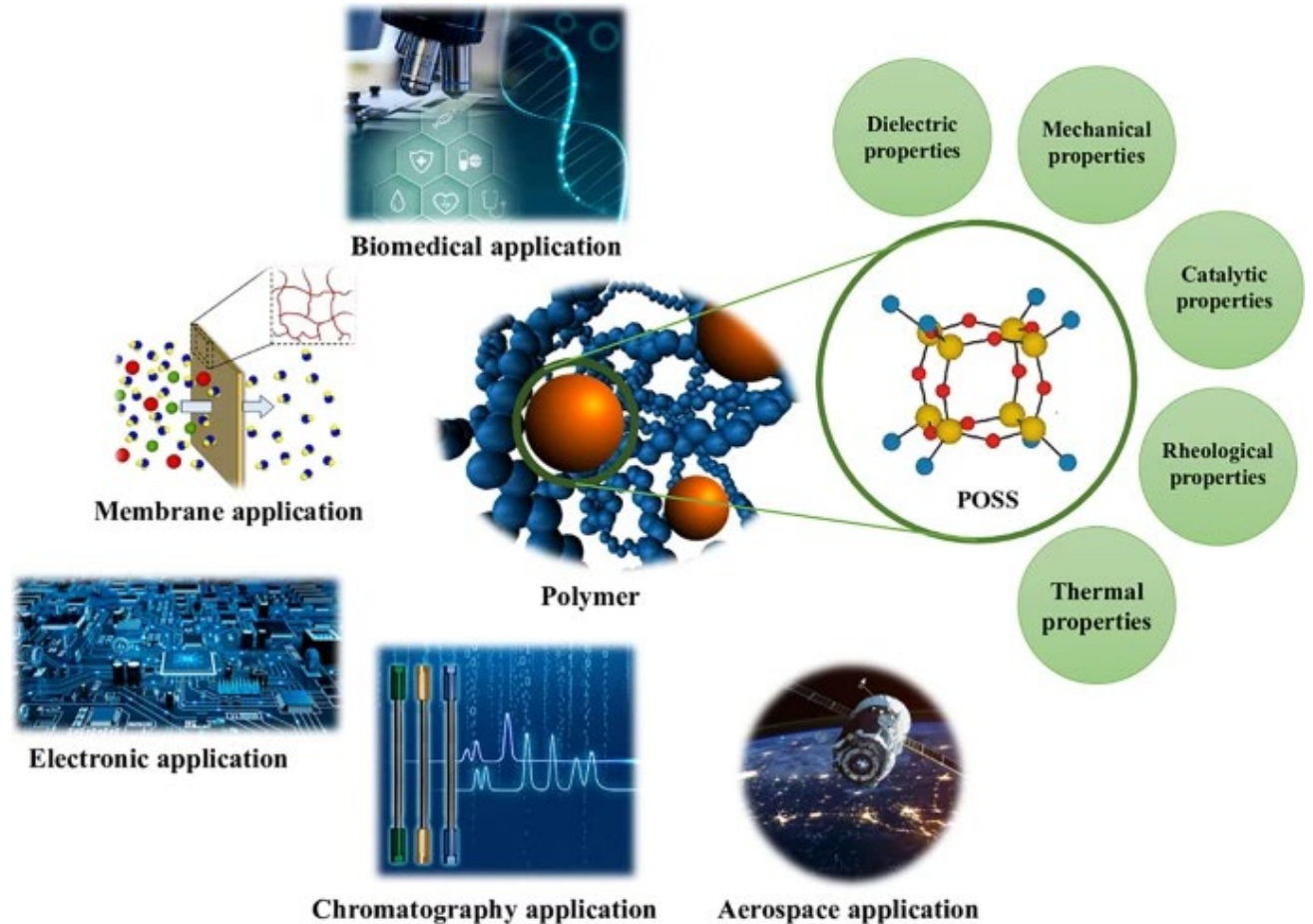
# Polyhedral Oligomeric Silsesquioxanes:

## Synthesis, Characterization and Applications

POSS<sup>®</sup> is a class of organic-inorganic hybrid materials with outstanding 3D configuration, definite framework, and customizable physicochemical properties which may be considered as the smallest possible form of silica-based materials with sizes of 1–3 nm. The general chemical formula of POSS is  $(\text{RSiO}_{1.5})_n$  ( $n = 6, 8, 10, 12,$ ) where R represents either a hydrogen atom or organic groups.



<https://phantomplastics.com>



<https://doi.org/10.1007/s12633-023-02494-4>

By: Majid Karimi

Iran Polymer and Petrochemical Institute