

Study of the effect of the incorporation of bulky groups in the main chain of ionic poly(imides) on their properties in gas transport

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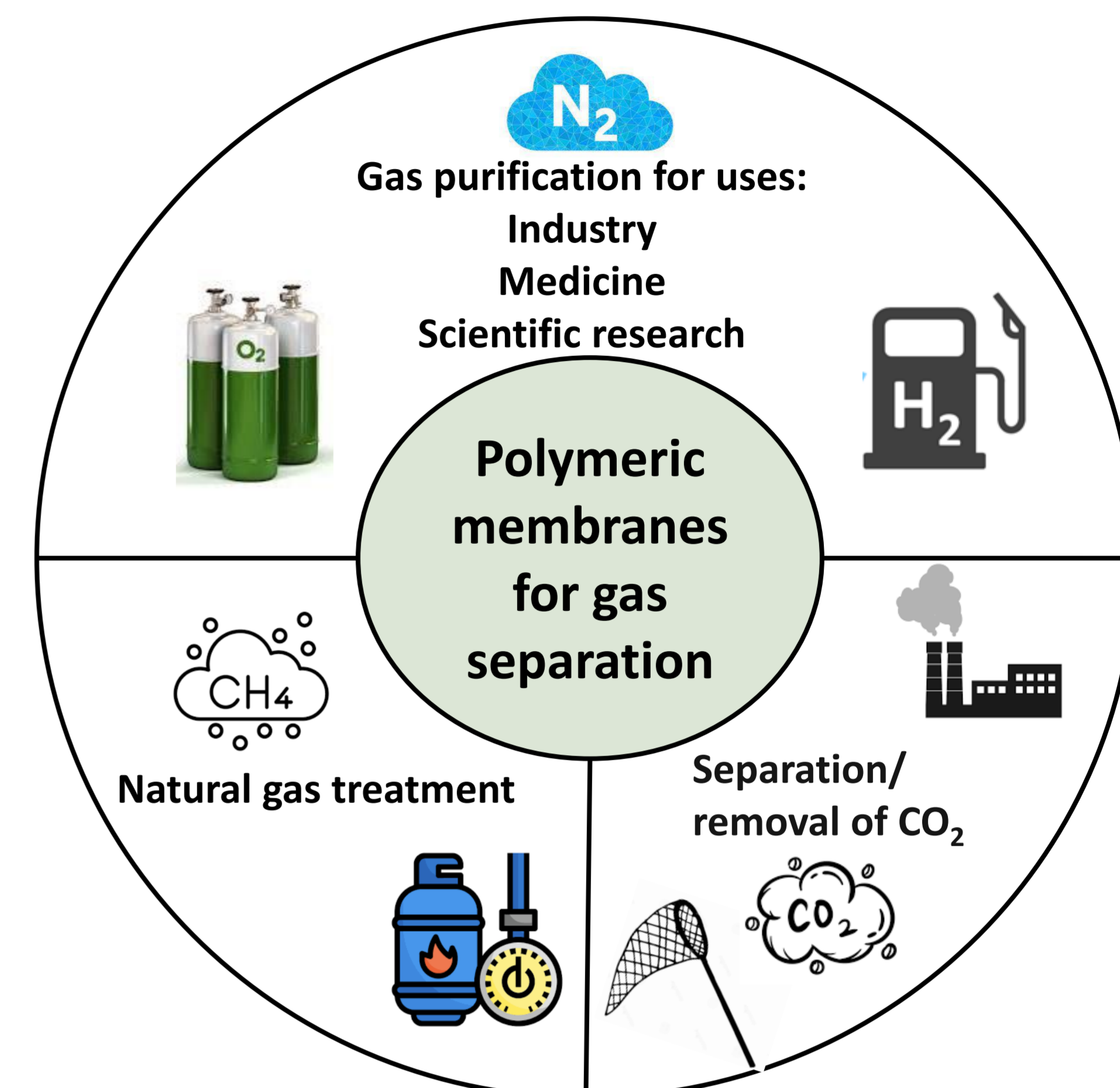
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INTRODUCTION

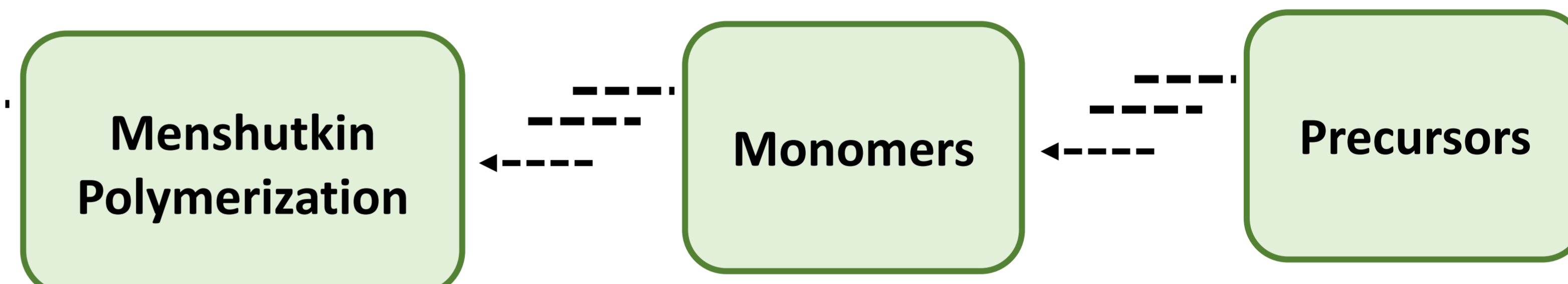
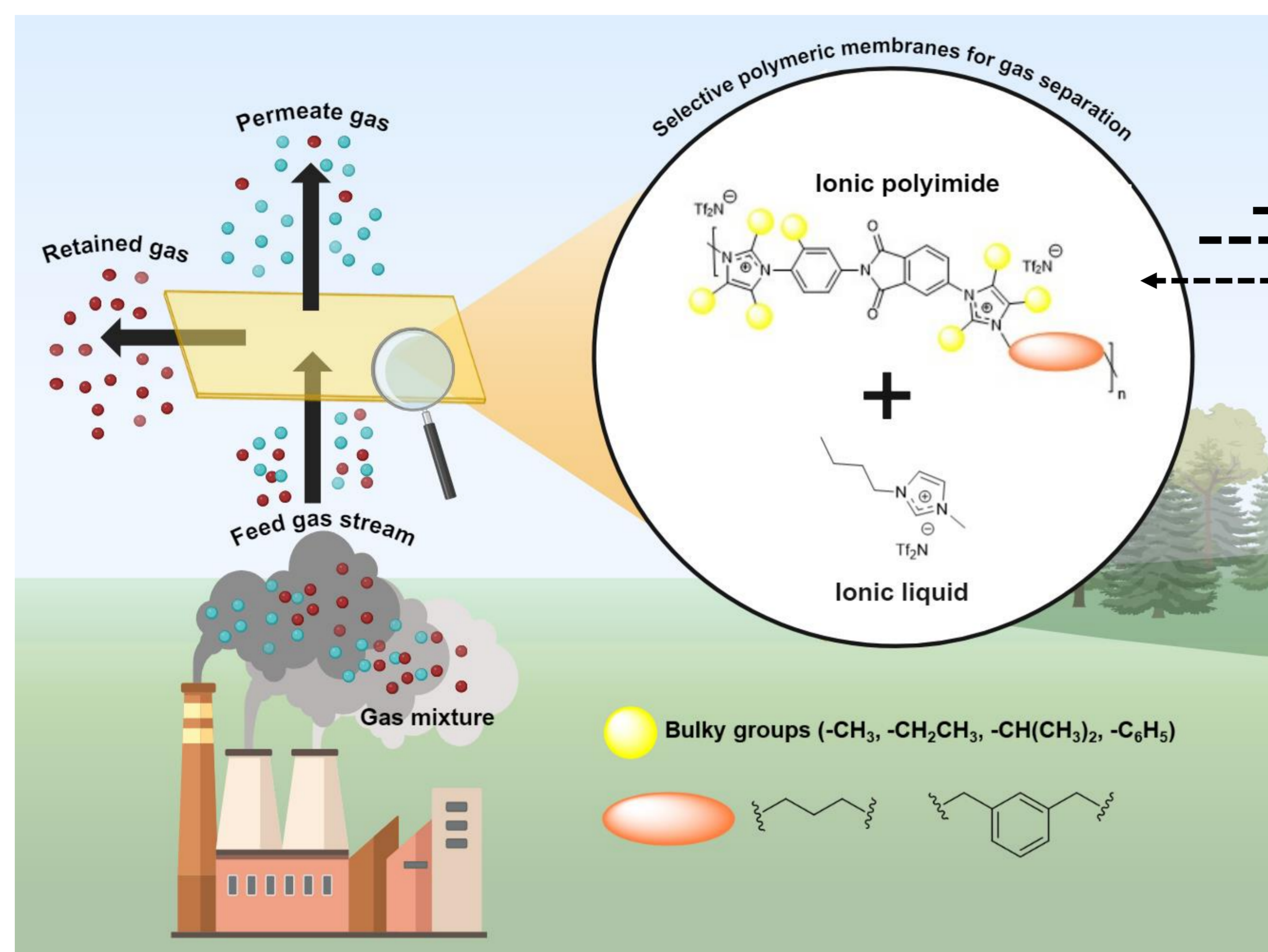
Polymeric membranes have gained increasing interest in industrial applications for gas separation due to their promising and effective ability to improve energy efficiency in various industrial processes.

Polyimides have been widely considered as materials for gas separation membranes due to their excellent mechanical and thermal stability. Moreover, it has been determined that incorporating ionic liquids (IL) into these materials improves the gas separation process. However, the mixing of these materials has been studied by a small group of researchers.

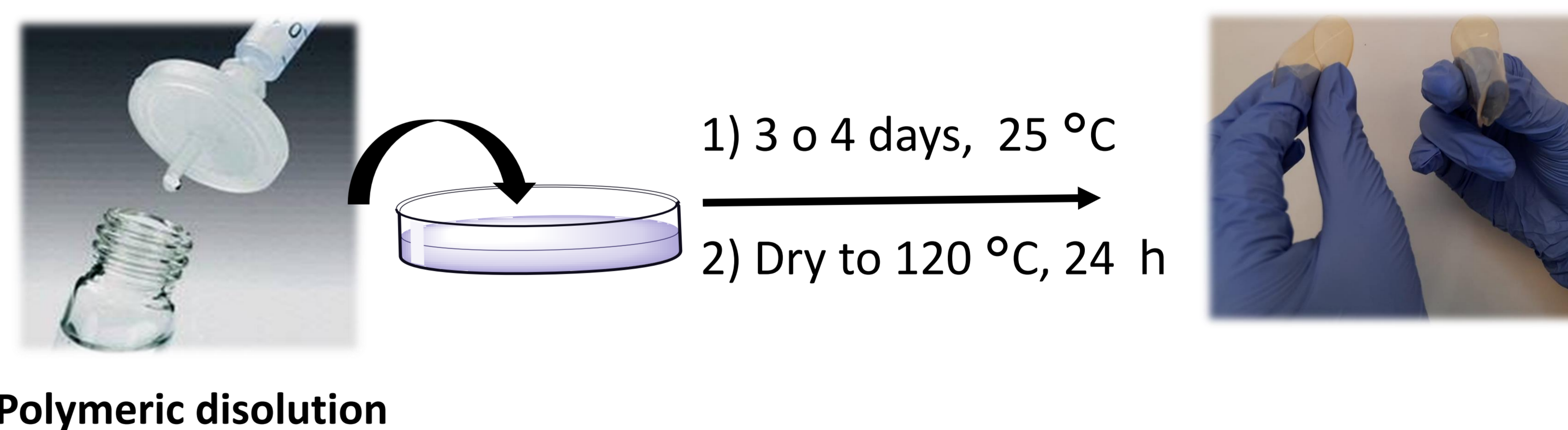
In order to contribute to this field of study, the objective of this work is to determine how the size and configuration of the substituent groups in these ionic polyimides affect the permeability and selectivity of the membranes for different gases, also exploring the impact of the incorporation of IL in the transport properties of gases through membranes.



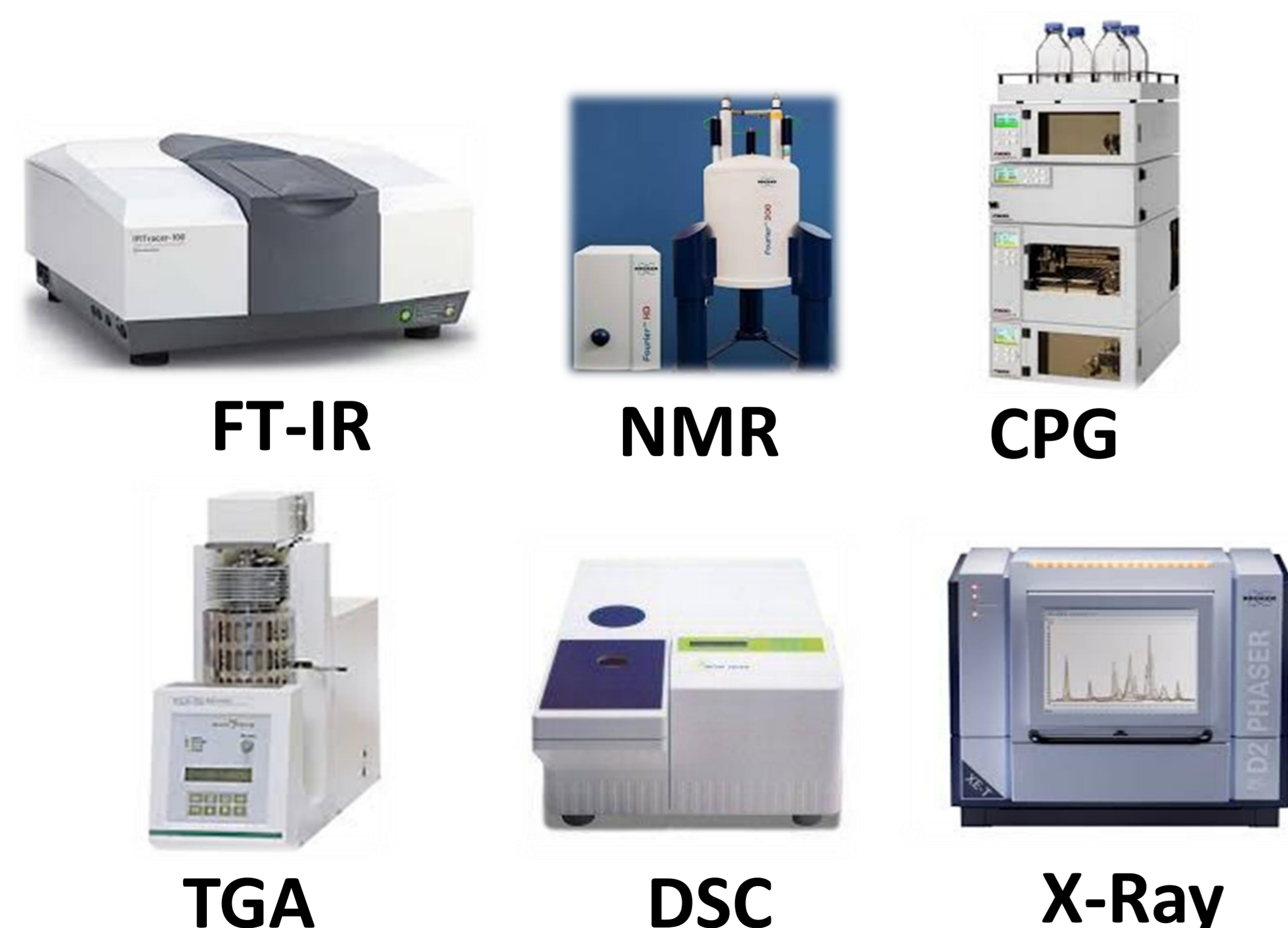
METODOLOGY



Preparation of polymeric membranes



STRUCTURAL AND PHYSICOCHEMICAL CHARACTERIZATION



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GAS TRANSPORT PROPERTIES

