Specific Polymers offers tailor-made synthesis of maleimide containing polymers
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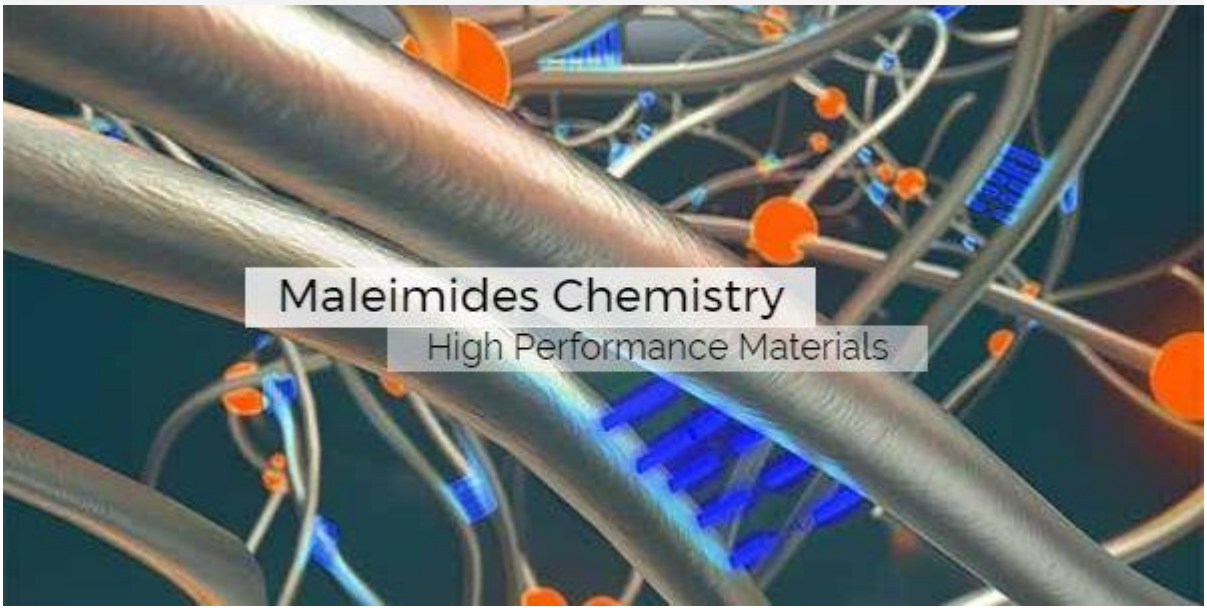

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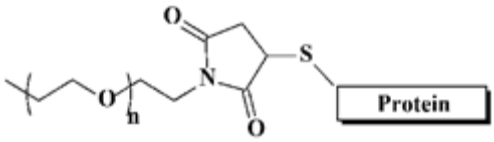
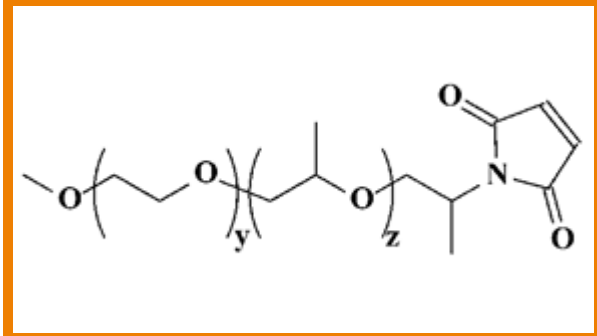
Due to high electron deficient double bond, the **maleimide functional groups can be involved in a large range of chemical reaction** such as Michael additions with various nucleophiles (thiolates or amines), Diels-Alder reactions due to its dienophilic character, radical co-polymerization reactions with electron donor compounds (vinyl, ether, or styrene derivatives) or anionic or radical homo-polymerization.[1]



For instance, the highly selective nature of the Michael addition of thiols to maleimides has led to maleimide containing polymers being widely used in biological applications, primarily to **conjugate biomolecules via thiol-containing cysteine residues.**

Such covalent attachment of polymers, most commonly poly(ethylene oxide), to biomolecules increases the in vivo effectiveness of protein-based drugs as a consequence of increasing the hydrodynamic volume of the protein and hence reducing renal filtration, preventing the approach of antibodies or antigen processing cells by masking the protein surface, and increasing the solubility and reducing the degradation of the protein by proteolytic enzymes. These superior properties to unmodified proteins make the materials of particular **interest for applications in the fields of medicine, biotechnology and nanotechnology** and indeed PEGylation has become a field of interest in its own right.[2]

Find more information about the molecules >



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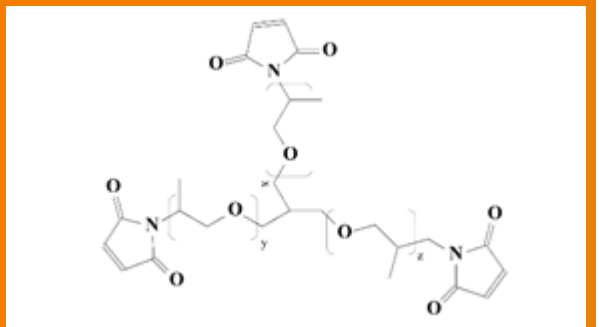

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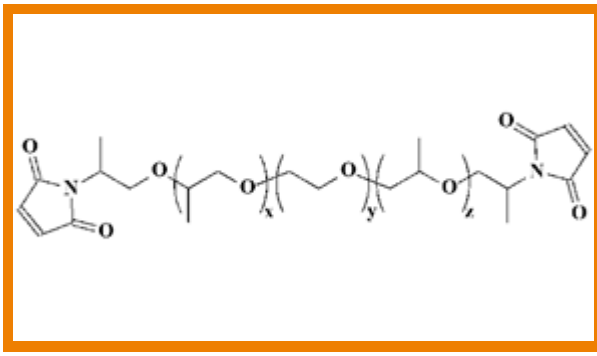

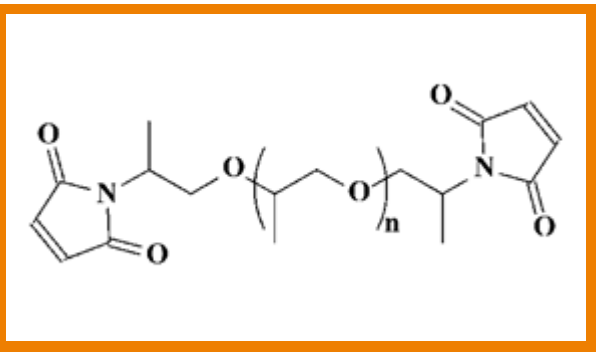

Moreover, maleimides containing polymers are gaining a great deal of attention in both scientific and industrial communities since they can be used in high performance macromolecular systems: **thermosets with high temperature stability, self-healing systems or UV-curable materials**.[3,4] In this field of research, SPECIFIC POLYMERS offers tailor-made synthesis of maleimide containing polymers.

For more information :

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