

# Adhesives Containing Gallol Groups

**Gallol-containing copolymers deliver mussel-inspired high-performance adhesion in wet and dry settings.**

NCS: Researchers at Purdue University have developed a new class of adhesive polymers with gallol groups. Gallol groups are similar to catechol groups found in mussel adhesive proteins that give mussels the characteristic ability to adhere on universal substrates. Many of the current adhesives have performance limitations including the ability to adhere well to wet surfaces or underwater conditions. The Purdue researchers proposed two synthesis mechanisms to produce different classes of gallol-containing copolymers. These adhesives showed superior bonding characteristics in both dry and wet conditions.

Technology Validation: The researchers validated their synthesis routes and gallol products using 1H-NMR data.

## Advantages

- High performance in wet and dry environments
- Biomimetic, hence natural adhesive properties already tested

## Applications

- Adhesives for wet substrates

**TRL:** 2

## Intellectual Property:

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Utility-Gov. Funding, 2023-03-30, United States

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## Category

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Materials/Coatings, Adhesives &  
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