# Synthesis of High Melt Strength Polypropylene Resin w/o Gel Content ID# 2019-4922



Polypropylene used in common object

# **Technology Summary**

Polypropylene-based resin is one of the most important thermoplastic materials with regard to its lightweight properties, thermo- and chemical stability and good cost performance. To improve melt strength of polypropylene resin, long-chain branched polypropylene (LCBPP) polymers were produced using commercial Ziegler-Natta catalysts with high catalyst activity and desirable polymer structures.

# Application & Market Utility

High-melt strength polypropylene resin that can be utilized for foaming applications. Polypropylene foam is a tough, resilient and lightweight foam that is moisture and chemical resistant and can be used across a wide range of temperatures. Polypropylene foam is often used for cushioning, packaging, automotive components, and many other applications.

## Next Steps

Demo available; seeking potential licensees.

## TECHNOLOGY READINESS LEVEL 4-7

## Seeking

Investment | Licensing | Research

## Keywords

- packaging
- foam
- polypropylene
- thermoplastic
- automotive

### Researchers

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### **Originating College**

College of Earth and Mineral Sciences

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