

Wake Forest University

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Featured Technology

Novel Silicon Substituted Dienes and their Cycloadducts

Inventors: Welker, Pidaparathi

TECHNOLOGY DESCRIPTION:

Researchers in the Department of Chemistry at Wake Forest University have developed novel silicon substituted dienes. These dienes and their cycloadducts are useful components for a number of commercial products, including:

- silicone-containing polyester resins
- polyamide resins
- silane coupling agents
- plasticizers for vinyl chloride
- curing agents for epoxy resins
- pharmaceuticals & agricultural products

Unlike existing silicon substituted dienes, these novel compounds are produced in high yield, enhance exo-selectivity in Diels-Alder cycloaddition reactions, and are significantly more stable than other highly reactive silicon dienes such as "Danishefsky's diene". Furthermore, these new reagents exist as solids at room temperature, which confers additional advantages in terms of purification and ease of use.

MATERIALS:

Samples of the silicon substituted dienes are available for research purposes from Strem Chemicals.

ADDITIONAL INFORMATION:

[Organic Letters, 2007, 9\(9\), 1623-1626](#)

[2,2',2''-Nitrilotris\(ethanolato\)\(buta-1,3-dien-2-yl\)silane](#)

[Bis\(1,2-benzenediolato\)\(1,3-butadien-2-yl\)silicate](#)

MISSION

To maximize the value of Wake Forest University's intellectual assets through the creation of novel and effective models for commercializing technology.

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