

Online Quantitative Monitoring of a Reacting Mixture

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Categories:

- Chemical Engineering
- Chemistry and Chemical Analysis

Keywords:

- Analytical Chemistry
- Chemical Engineering
- Chemistry and Chemical Analysis
- Mass Spectrometry

Accurately assessing an extremely small quantity of a substance is a constant challenge for researchers in many fields, including chemistry. Specifically, reacting mixtures need to be carefully and extremely accurately measured in terms of its precise chemical makeup. While mass spectrometry is more successful in this usage than other methods of chemical analysis, it has not been used for on line quantitative analysis of mixtures including those present in chemical and pharmaceutical manufacturing and development.

Researchers at Purdue University have developed a new method for on line quantitative analysis of chemical mixtures. This method can be used on specific chemicals in a mixture, including bulk reagents and impurities. By continuously removing a small amount, diluting, and adding standards and ionization before spectrometry, the technology can provide high quality, specific information. This information is both quantitative and qualitative in nature, and can be used to refine mixtures for reactions.

Advantages:

- Quantitation of specific, small amounts of chemicals
- Provides high quality information
- Qualitative and quantitative analysis

Potential Applications:

- Chemical manufacturing
- Pharmaceutical manufacturing

People:

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Intellectual Property:

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