

Session 4

Emerging Opportunities for Industrial Chemicals

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This session introduced, as well as provided, an overview of the current effects of Biotechnology within the Chemical Industry. The co-chairs, Dr. Marion Bradford and Dr. Jonathan Mielenz, provided informal introductory remarks regarding the current impact of biotechnology in the chemical industry, perceived hurdles to broad application of bioprocessing in this industry, and prospects for the future. The panel included John Frost of Michigan State University, Dale Monceaux of Ray Katzen and Associates, along with the session chairs and active audience participation. An apparent expanding interest in bioprocessing by some chemical companies suggests growing opportunities to apply biotechnology to chemical production. The co-chairs led a discussion addressing whether this is a transient anomaly or an indication of a sustainable growth area. The session examined the business areas within the chemical industry that are benefiting from bioprocessing. Pharmaceutical and agrochemical products are strongly bioprocess-based, while food and nutrition areas are growing in their use of biotechnology. However, application of bioprocessing to the commodity chemicals business is only slowly emerging, with the exception of products that are closely tied to commodity grains, such as corn and soybeans. Continued focus on what roadblocks to use of bioprocessing and bio-based feedstocks need to be addressed by such programs as Vision 2020 for the Chemical Industry.