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Brief history of plastics and how they conquered the world

On February 28, 1935, Wallace Carothers, a scientist at the DuPont Experimental Station, developed and produced the first synthetic man-made fiber. This was the birth of Nylon, starting a technology revolution and creating the 'plastic age'. Although, nylon stockings were introduced at the 1939 New York fair, a whole year of testing took place before they were sold in stores. Science has continued to develop plastics that changed our lives, from nylon, through polypropylene to Kevlar. Eighty years after the nylon revolution, science has improved polymerization synthesis and processing techniques, unleashing a flood of products, including consumer goods and industrial products. As plastics have become valuable, scientists are also attempting to make them safer and more sustainable. Some innovators are developing bioplastics, which can be biodegradable or non-biodegradable. Plastics composites, used in transportation, provide lighter materials and contribute to fuel efficient. Market players are working with researchers, institutes and universities to develop new and innovative materials in both existing and emerging markets that can meet the growing demand from application industries. This presentation will provide a brief history of plastics and how they came to conquer the world. It will review progress in polymer innovation from historical perspective and key commercial polymers. Key synthetic routes that have impacted the development of polymers will be examined and some commercial applications for plastics will be discussed. The discussion will recognize that plastics are not perfect but that they are an important part of our future.

Biography

Mosongo Moukwa is a senior level Management Professional and Entrepreneur recognized for his achievements in helping companies improve their profitability by commercializing new technologies and developing new markets. He is Director of Technology at PolyOne for the Designed Structures and Solutions Division. He was Vice President of Global Technology at Johnson Polymer, WI, now part of BASF, Vice President of Global Technology at Reichhold, NC. Most recently, he was Vice President of Technology at Asian Paints, India. He holds a PhD from the Universite de Sherbrooke, Canada and was a NSERC Postdoctoral Fellow at Northwestern University, IL. He also holds an MBA from Case Western Reserve University, OH. He is a member of the American Chemical Society.

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