



Creating Value

William F. (Bill) Banholzer owes his accomplished career in the chemistry industry in part to his less than perfect eyesight.

"I always intended to be a pilot, but when they tested my eyesight, it turned out I only had 20/30 vision," he says. "The Air Force Academy, where I was hoping to study, would have required me to go in on waivers. I was not impressed by this turn of events, so I decided to be a doctor instead and majored in chemistry, but it was not long before I realized that I did not particularly like working with sick people."

Banholzer earned a bachelor's degree in chemistry from Marquette University in Milwaukee, Wis., and master's and doctorate degrees in chemical engineering from the University of Illinois.

"I love chemistry," he says, "but it wasn't love at first sight."

Now, years later, Banholzer is Chief Technology Officer (CTO) and Executive Vice President of Ventures, New Business Development, and Licensing for Dow Chemical. His responsibilities include driving innovation, as well as leading Dow's research and development (R&D) activities around the world.

"Innovation is an overused word," he says. "I prefer 'industrial research,' which is a journey that can take

Photos courtesy Dow Chemical



Dow CEO Andrew N. Liveris (right) hired William F. Banholzer (left) as CTO in 2005.

between five to 15 years. When you finally see your product developed and in action, it's a very satisfying journey."

Banholzer played a significant role in chemistry innovation and R&D early in his career. He helped develop a stealth material for jet engines currently used by the military. The material was the first of its kind to withstand extreme heat and not be detectable by a radar system.

"There's a lot of science you could be working on," says Banholzer. "My job now is to figure out what people will pay for. R&D is not a right, it is a privilege you earn by creating value."

In 2002, he was elected to the U.S. National Academy of Engineering (NAE), making him one of only 105 active chemical engineers in the institution, which honors those who have made recognizable contributions to engineering theory and practice or demonstrated unusual accomplishment in the pioneering of new and developing fields of technology. In 2006, NAE's members elected him to serve as one of 12 councillors in their governing body.

Today, Banholzer holds 16 U.S. patents and has over 80 works published, which have received more than 1,000 citations, for his work in the field of engineering and chemistry. Among the hundreds of projects Dow is currently working on, he says there is no one specific development or area of research that is his favorite.

"That's like asking me to pick my favorite child," he says. "It's a very exciting time both for chemistry and for Dow in terms of what is being developed. For example, Dow is currently the only company in the world to develop a cost-effective approach to olefin-based block copolymers (OBCs), which we launched commercially as INFUSE™ OBCs."

OBCs feature a unique block architecture that represents an innovative breakthrough in olefin-based elastomers. The properties and processability of OBCs make them cost-effective and competitive with materials such as thermoplastic vulcanizates (TPVs) and thermoplastic polyurethanes (TPUs).

They are finding use in a wide range of innovative market applications, including elastic films, adhesives, foams, and flexible molded goods and profiles.

In the end, Banholzer says he believes chemistry and innovation not only go hand in hand, but are necessary for future sustainability.

"You don't have things without chemistry," he says. "That's why it is called the central science. We will continue to depend on it in areas such as energy sources, food, and materials." ●

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