



Sloan Career Cornerstone Center

Profiles of Chemists



Terry St. Clair

**Head, Composites and Polymers Branch
NASA Langley Research Branch
Hampton, VA**

Education:

B.S. - Chemistry, Roanoke College
Ph.D. - Organic Chemistry, Virginia Tech

Job Description:

Head, Composites and Polymers Branch

Interview:

Polymer development at NASA occupies a unique position in the field of polymer chemistry. Terry St. Clair, head of the polymeric materials branch at NASA Langley, explains that his work both serves NASA's polymer materials needs and functions as an incentive for the rest of industry to make the best polymer materials possible. "Our mission," he explains, "is to make sure that the materials that aircraft companies need are available. This, in some cases, forces industry to offer a more optimized product than the one they might want to push.

We do a lot of the same type of polymer work as is done in industry, but in a broader and freer structure that is not confined by cost, he says. In some ways, this makes NASA a competitor with other polymer makers, the difference being that NASA does not actually manufacture large quantities of polymer materials. In some cases, St. Clair will work directly with an aircraft company to develop the products it needs. "When they have endorsed the material, we both go out into the market to try to find someone to make it," he says.

Another aspect of his job is to develop polymers for highly focused applications, such as the scientific instruments used in the space program. Staff in St. Clair's lab were asked to make a polymer used in the window of an X-ray telescope. "Only about five pounds of this material was needed annually," he says. "We were in a position to develop an exotic polymer where cost was not a factor. They would have been happy to use platinum or gold if it would work.

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