



OFFICE OF TECHNOLOGY TRANSFER & COMMERCIALIZATION

**CATEGORY:** Nano-Technology & Materials

**SUBCATEGORY:** Materials

**TITLE:** An Ultrahigh-Selectivity Oxygen Enrichment Filled Elastomeric Silicone Polymer Membrane Incorporating Nanofillers.

**PATENT NO. Patent Pending**

**OWNER:** *North Carolina Agricultural and Technical State University*

**INVENTOR (S)/PRINCIPAL INVESTIGATOR (S):**

- Jianzhong Lou
- Jag Sankar

**TECHNOLOGY DESCRIPTION:**

Researchers at NC A&T State University have developed a method of making a polymeric membrane using Nanofillers to create a thin film layer either self-supporting or coated on a porous substrate. The membrane enables certain gases to permeate this membrane more rapidly and much easier than other gases. Therefore, this technology is useful for making personal care devices that can filter the air to produce more concentrated oxygen by removing the nitrogen from air. This membrane and the process of making the oxygen enrichment devices is potentially useful in personal care, industrial gas purification processes and other field when eliminating impure gases is critical.

**END USE/APPLICATIONS:** Personal care, Gas purification processes

**OTHER INFORMATION/LINKS:**

<http://dor.ncat.edu/under/ottc/index.htm>