



Aromatic polyamide compositions and fibers

Description of Technology: This invention relates to polymeric compositions of aromatic polyamides with a fullerene component, and fibers therefrom which have improved torsional strength and a process for preparing said fibers.

Patent Listing:

1. **US Patent No. 5,276,085**, Issued January 4, 1994, "Aromatic polyamide compositions and fibers"

<http://patft.uspto.gov/netacgi/nph-Parser?Sect2=PTO1&Sect2=HITOFF&p=1&u=%2Fnethtml%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&d=PALL&RefSrch=yes&Query=PN%2F5276085>

2. **US Patent No. 5,296,543**, Issued March 22, 1994, "Aromatic polyamide compositions and fibers"

<http://patft.uspto.gov/netacgi/nph-Parser?Sect2=PTO1&Sect2=HITOFF&p=1&u=%2Fnethtml%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&d=PALL&RefSrch=yes&Query=PN%2F5296543>

Market Potential: Since the isolation of fullerenes by Kratschmer et al., Nature, Vol. 347, pp. 354-358 (1990), the chemistry surrounding fullerenes has been the focus of intense research. Fullerenes have been studied per se and in combination with other substances with the goal of modifying the properties of the resulting compositions.

Copending, commonly assigned, application Ser. No. 07/954,181 describes the use of fullerenes to provide improved photoconductive compositions from both photoconductive and non-photoconductive polymers.

The present invention is directed to providing aromatic polyamides and fullerene compounds which form fibers having improved processability and compression strength as measured by torsional modulus. Of particular commercial importance are aromatic polyamides, processed as fibers, which have uses such as: in composites, cut-resistant gloves, clothes, and cables.

Benefits:

- Improved processability and compression strength

Applications:

- Fibers
- Composites, cut-resistant gloves, clothes, and cables

Contact: Ken Anderson

Director, Entrepreneurial & Small Business Support, Delaware Economic Development Office (DEDO)

Carvel State Building, 820 French Street, Wilmington, DE, 19801

Phone: (302) 577-8496, Fax: (302) 577-8499, Email: Kenneth.R.Anderson@state.de.us