

Patent List of Prof. (Neal) T. S. Chung

A: US Patent:	<u>Date of Issue</u>	<u>Title</u>
1. US 4,588,538	(May 1986)	<i>Process for preparing tapes from thermoplastic polymers and carbon fibers</i>
2. US 4,734,240	(March 1988)	<i>Melt-extrusion of polymer which is capable of forming an anisotropic melt phase to form large shape articles exhibiting improved polymer orientation</i>
3. US 4,799,985	(January 1989)	<i>Method of forming composite fiber blends and molding same</i>
4. US 4,818,318	(April 1989)	<i>Method of forming composite fiber blends</i>
5. US 4,842,740	(June 1989)	<i>Membranes prepared from blends of polybenzimidazoles and polyarylates</i>
6. US 4,871,491	(October 1989)	<i>Process for preparing composite articles from composite fiber blends</i>
7. US 4,874,563	(October 1989)	<i>Process for preparing tows from composite blend fibers</i>
8. US 4,963,628	(October 1990)	<i>Compositions of polybenzimidazoles and polyarylates</i>
9. US 4,910,106	(March 1990)	<i>Formation of halogenated polymeric microporous membranes having improved strength properties</i>
10. US 4,997,603	(March 1991)	<i>Process for formation of halogenated polymeric microporous membranes having improved strength properties</i>
11. US 5,043,113	(August 1991)	<i>Process for formation of halogenated polymeric microporous membranes having improved strength properties</i>
12. US 5,055,116	(October 1991)	<i>Gas separation membranes comprising miscible blends of polyimide polymers</i>
13. US 5,091,087	(February 1992)	<i>Fabrication of microporous PBI with narrow pore size distribution</i>
14. US 5,110,879	(May 1992)	<i>Miscible blends of polyimide and processes for forming the same</i>
15. US 5,140,093	(August 1992)	<i>Melt-processable thermotropic polyesters having fluorine containing linking groups</i>
16. US 5,155,179	(October 1992)	<i>Miscible blends of polyimide polymers</i>
17. US 5,200,274	(April 1993)	<i>Surface-modified Celgard polypropylene hollow fibers</i>
18. US 5,208,298	(May 1993)	<i>Stable solution of polybenzimidazoles and polysulfone blends</i>
19. US 5,209,883	(May 1993)	<i>Fabrication of fluoropolymer hollow fibers for asymmetric membranes</i>
20. US 5,213,689	(May 1993)	<i>Asymmetric fluoropolymer-coated polyolefin hollow fibers</i>
21. US 5,250,633	(October 1993)	<i>Fibers and fibrets from Blends of polybenzimidazoles and aromatic polyamides, aromatic polyamide-hydrazides or aromatic polyamide containing heterocyclic linkages</i>
22. US 5,290,884	(March 1994)	<i>Blends of polybenzimidazoles and aromatic polyamides, aromatic polyamide-hydrazides or aromatic polyamide containing heterocyclic linkages</i>
23. US 5,302,418	(April 1994)	<i>Process for surface-modifying polypropylene and polyethylene</i>
24. US 5,320,754	(June 1994)	<i>PAN composite hollow membranes</i>
25. US 5,324,430	(June 1994)	<i>High-performance PAN composite membranes</i>
26. US 5,358,780	(October 1994)	<i>Breathable water-resistant fabrics</i>
27. US 5,413,852	(May 1995)	<i>SIXEF™-durene polyimide hollow fibers</i>

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| 28. | US 5,490,931 | (February 1996) | <i>Fabrication of a fluoropolymer hollow fiber having a defect-free separation layer</i> |
| 29. | US 5,558,936 | (Sept, 1996) | <i>High selectivity hollow fibers</i> |
| 30. | US 5,614,309 | (March 1997) | <i>Coated polypropylene or polyethylene useful for membranes</i> |
| 31. | US 6015516 | (January 2000) | <i>Ultrathin high-performance hollow fiber membranes</i> |
| 32. | US 6045906 | (April 2002) | <i>Continuous, linearly intermixed fiber tows and composite molded article thereform</i> |
| 33. | US 6,403,504 | (June 2002) | <i>Composite fiber blends</i> |
| 34. | US 6,660,062 B2 | (Dec 2003) | <i>Chemical modification of polyimide</i> |

World and Other Countries Patents

- | <u>Country</u> | <u>Date of Issue</u> |
|---|----------------------|
| 1. Canada Patent No: 1,294,772 | (January 1992) |
| 2. Canada Patent No: 1,311,591 | (December 1992) |
| 3. European Patent No: 156,600 | (May 1988) |
| 4. European Patent No: 356,045 | (August 1989) |
| 5. European Patent No: 465,251 | (1991) |
| 6. European Patent No: 510,818 | (October 1992) |
| 7. European Patent No: 563,871 | (October 1993) |
| 8. Germany Patent No: 68,924,224.7 | (August 1989) |
| 9. Koreas Patent No: 67,552 | (August 1989) |
| 10. Taiwan Patent No: NI-53048 | (April 1992) |
| 11. World Patent No: 9,218,763 | (1992) |
| 12. World Patent No: 9,302,767 | (February 1993) |
| 13. World Patent No: 9,302,858 | (February 1993) |
| 14. Patent Application: PCT/Sg00/00017 | [February 8, 2000] |
| 15. Singapore Patent Application: 200003864-6 | [July 12, 2001] |
| 16. Singapore Patent Application: 200104997-2 | [August 15, 2001] |
| 17. UK Patent Application: 0126881.2 | [November 8, 2001] |
| 18. Japan Patent Application: 2001-348545 | [November 14, 2001] |
| 19. US patent application 60/453,971 | [March 13, 2003] |
| 20. US Patent application 2003/70545 | [April 17, 2003] |