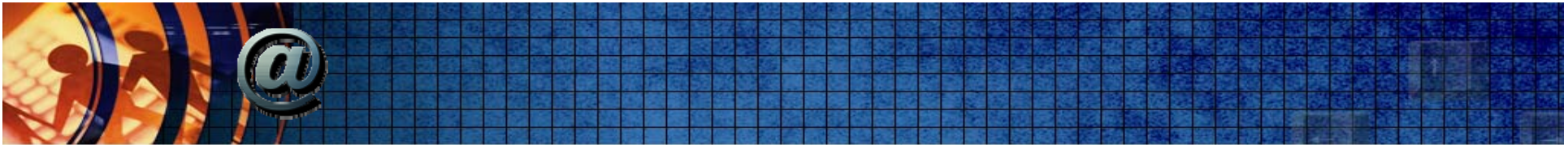




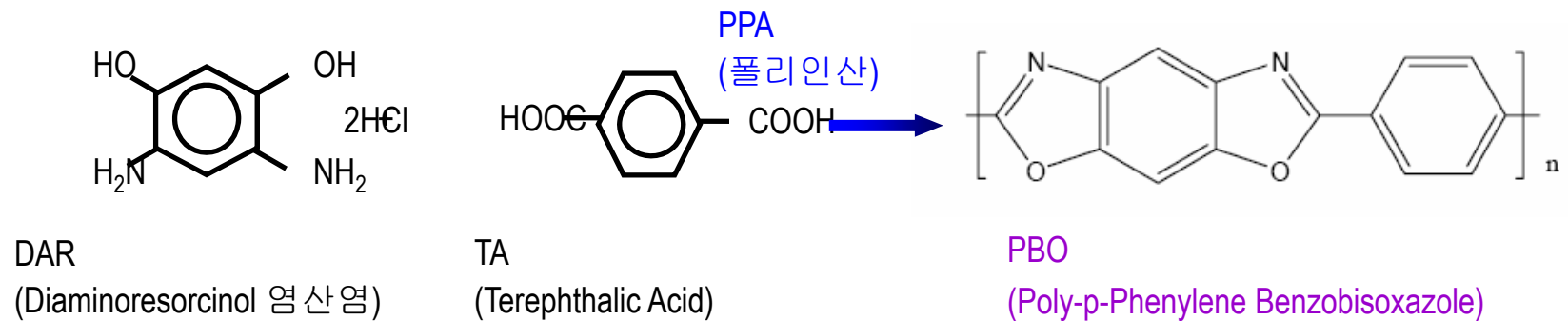
슈퍼파이버-**PBO** 섬유

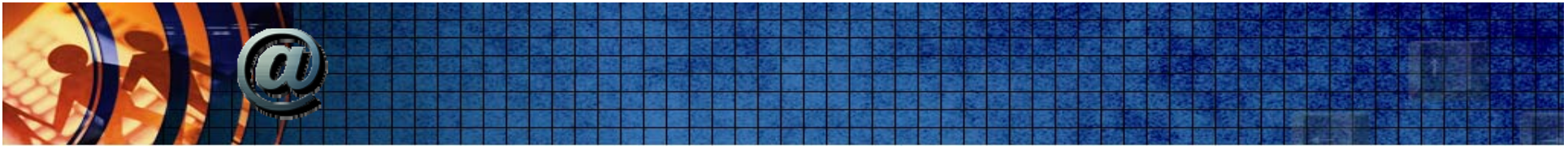
www.ssu.ac.kr



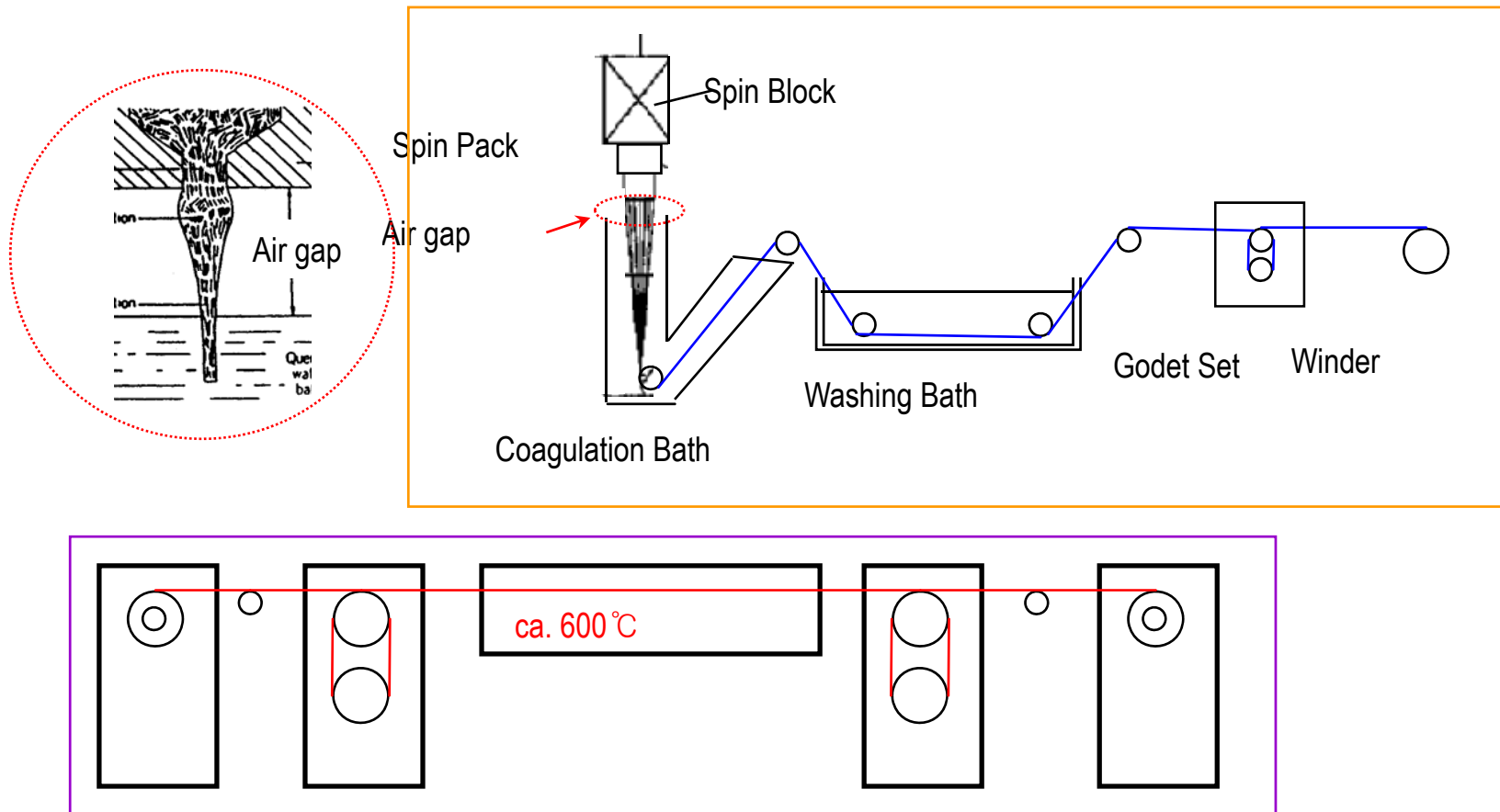
5.1. PBO(Poly-p-Phenylene Benzobisoxazole) 섬유

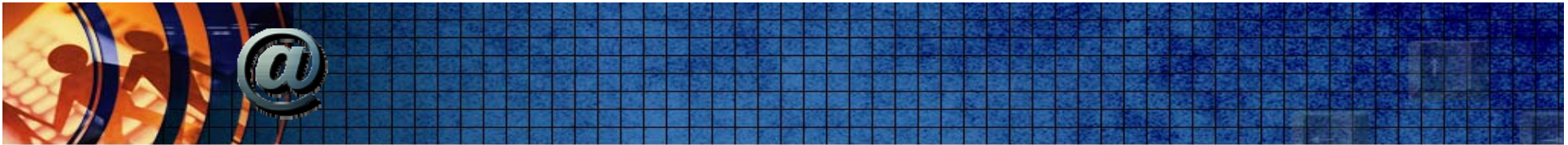
- ▶ Polybenzoxazole : 주쇄를 이루는 방향족환 내에 N(질소)원자가 들어가서 분자의 전체적인 물성을 지배하는 Nitrogen controlled Super섬유
- ▶ 대표적인 제품 : Zylon(Toyobo社) => 강도, 탄성율, 난연성, 내열성등.. 세계 최강
- ▶ Polymerization



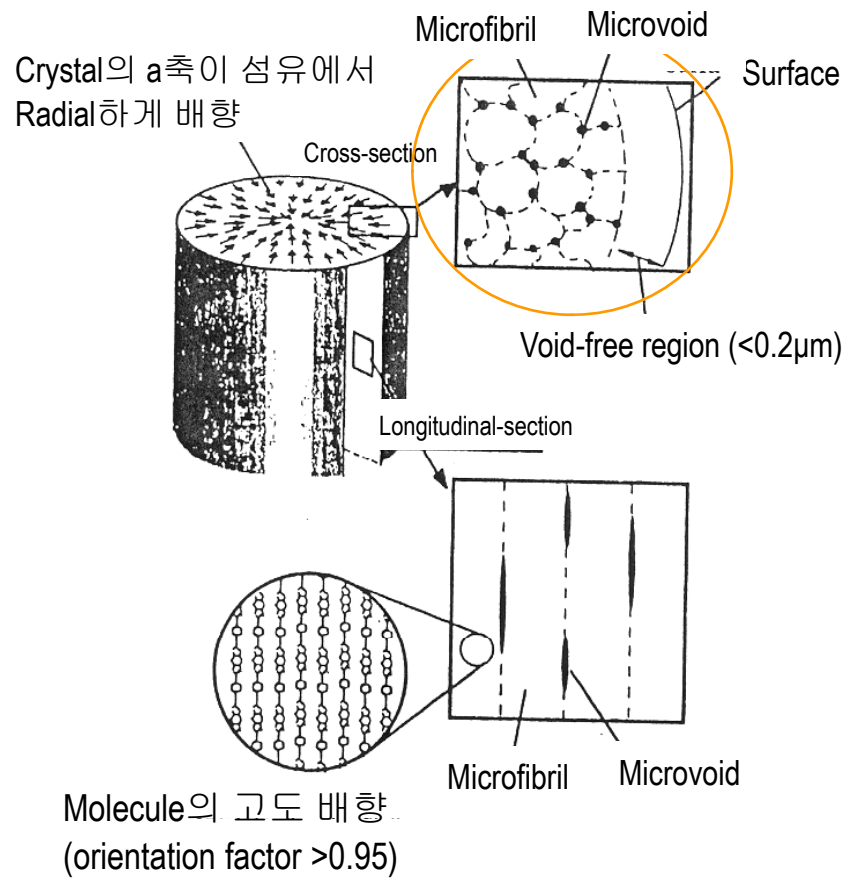


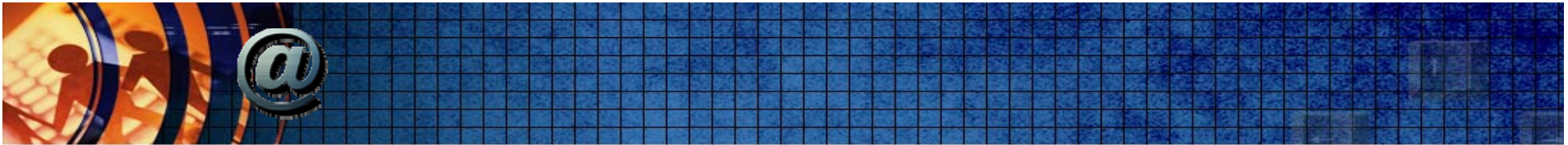
5.2. PBO(Poly-p-Phenylene Benzobisoxazole) 제조 Process





5.3. PBO(Poly-p-Phenylene Benzobisoxazole)섬유 구조

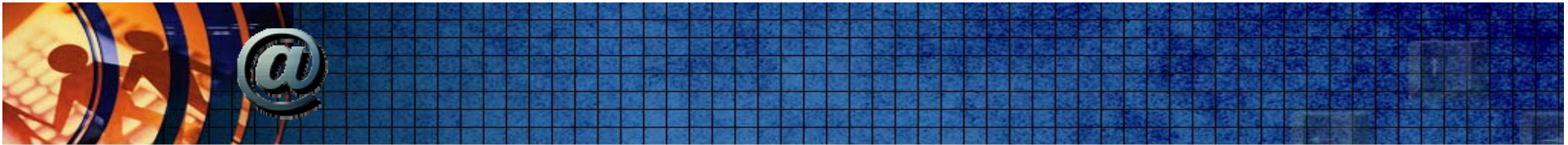




5.4. PBO(Poly-p-Phenylene Benzobisoxazole)섬유의 특성 및 물성

- ▷ High strength & Modulus
- ▷ High Creep Resistance
- ▷ High Heat & Flame Resistance
- ▷ High Chemical Resistance
- ▷ High Light Resistance
- ▷ High Morphology Stability (Thermal)

	강도 (g/d)	Modulus (g/d)	신도 (%)	밀도 (g/cm ³)	LOI	융점 (°C)
Zylon AS	42	1300	3.5	1.54	68	650
Zylon HM	42	2000	2.5	1.56	68	650
Kevlar	22	850	2.4	1.45	29	550

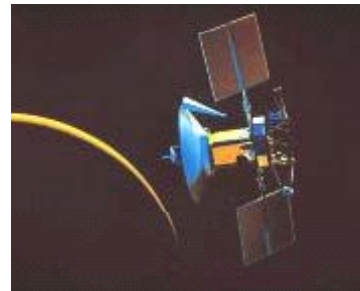


5.5. PBO(Poly-p-Phenylene Benzobisoxazole)섬유의 생산 계획 및 Application

▶ PBO섬유 생산 계획

	1998년	2000년	2005년	2010년
생산량(Ton/년)	200	380	1,000	3,000

▶ 응용분야 : 보호장비, 고성능 스포츠 상품, 항공 우주분야, 산업자재용





Thank You !