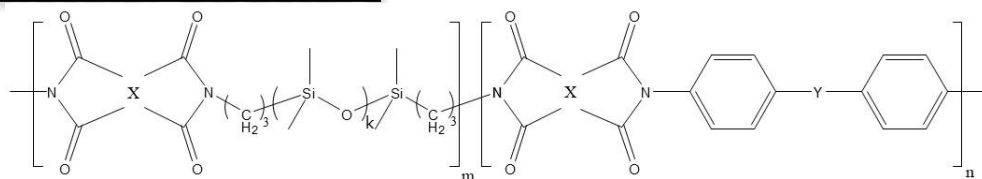
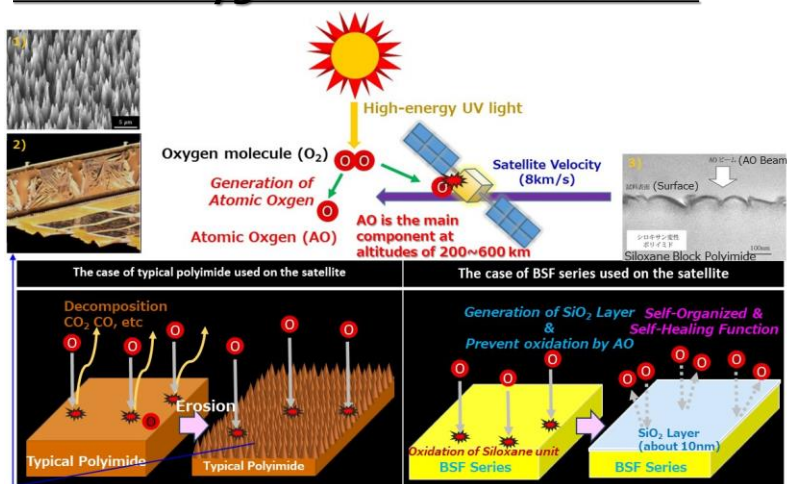


Atomic-Oxygen Tolerant Film "Siloxane Block Polyimide BSF series" for LOW and Very LOW EARTH ORBIT SATELLITE

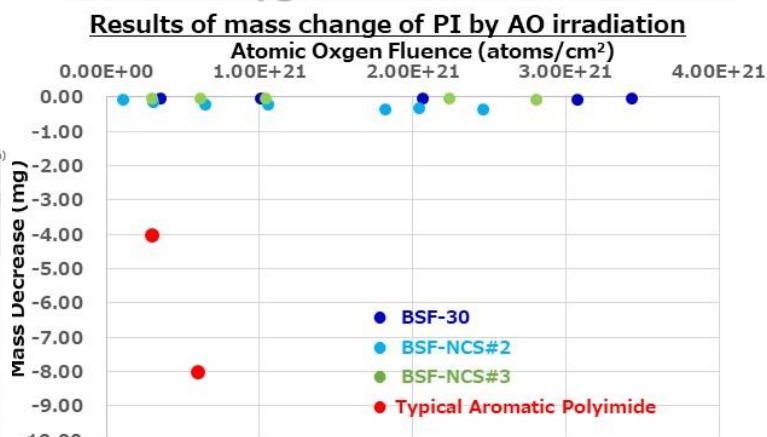
Typical Molecular Structure



Atomic-Oxygen Tolerant Mechanism



Atomic-Oxygen Tolerant Test Results



Provided by JAXA

Typical Properties

Item	unit	BSF-30	BSF-NCS#2	BSF-NCS#3
Glass transition temp (Tg)	℃	187	176	140
5% Thermal decomposition (Td5)	℃	456	462	456
coefficient of thermal expansion(CTE)	ppm/K	100	68	92
Young's Modulus	GPa	1.4	1.9	1.7
Elongation	%	15	11	45
Tensile Strength	MPa	53	87	59
Cyclic silicone Outgassing component	—	Contain	None	None

Exposure Tests



Before Flight on ISS KIBO



After Flight for 8.5 months

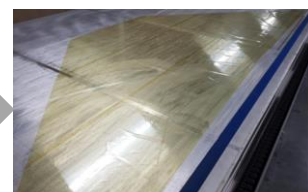
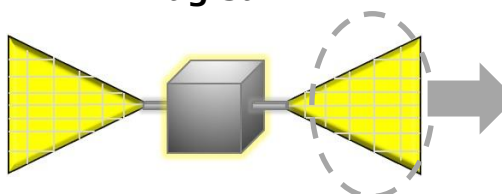


Market Needs

- ★ Satellite weight reduction
- ★ Simplified satellite assembly process
- ★ Preventing the formation of space debris

Application Example

- ★ Multi-layer insulation (MLI)
- ★ Substrate of Solar Panel
- ★ Anti-debris coating of CFRP
- ★ Drag Sail



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