

Patent Family	Title	Country	Patent Application or Publication Number	Patent Grant or Registration Number	Summary (Proposed)	Hyperlink
SILE21	신규의 폴리유기실록산 유전물질	South Korea	KR.20077007080.A or KR.20070054705.A	KR101222428B1	This patent describes polyorganosiloxane based dielectric materials for forming insulating thin films in semiconductor devices. The technology enables improved electrical performance through low k dielectric properties, high thermal stability, and controlled film density and thickness. These materials enhance process compatibility and reliability in integrated circuit fabrication, supporting advanced semiconductor and optical device applications.	
	Polyorganosiloxane dielectric materials	USA	US11/215,303 or US20060058487	US7504470		https://data.uspto.gov/patent-file-wrapper/search/details/11215303/application-data
SILE31	폴리머층을 구비한 반도체 광전자 디바이스	South Korea	1020097000594	KR101596358	This patent relates to siloxane based polymer materials and their application in semiconductor optoelectronic devices. The technology enables improved optical and electronic performance through tailored polymer structures that provide gap filling, planarization, passivation, and optical integration. These materials deliver high refractive index control, low dielectric constants, and mechanical stability, supporting advanced image sensor architectures and reliable semiconductor fabrication.	https://doi.org/10.8080/1020097000594
	半導體光電裝置	Taiwan	961222010	TW473255		https://tponet.tipo.gov.tw/tpat1/tpatc/tpatengkm?00054117A00060101000000000103200000003E000000000-B
	半導体オプトエレクトロニクスデバイス	Japan	JP2009-514793 or JP2009-540589A	JP5761913		https://www.j-platpat.inpit.go.jp/c1801/PU/JP-2009-540589/1/en
SILE32	Novel nanoparticle containing siloxane polymers	Austria		AT2091999	This patent describes siloxane polymers incorporating nanoparticles to enhance material properties such as optical performance, dielectric control, and film stability. The technology enables the formation of cross linked polyorganosiloxane thin films with tunable thickness and mechanical reinforcement, supporting advanced coatings and semiconductor optoelectronic applications. These nanoparticle reinforced films improve reliability, process compatibility, and functional integration in next generation devices.	https://register.epo.org/application?number=EP07858337&lng=en&tab=legal
	Novel nanoparticle containing siloxane polymers	Germany		DE2091999		https://register.epo.org/application?number=EP07858337&lng=en&tab=legal
	Novel nanoparticle containing siloxane polymers	France		FR2091999		https://register.epo.org/application?number=EP07858337&lng=en&tab=legal
	Novel nanoparticle containing siloxane polymers	Italy		IT2091999		https://register.epo.org/application?number=EP07858337&lng=en&tab=legal
	含奈米粒子的新穎矽氧烷聚合物	Taiwan	96149232	TW433893		https://tponet.tipo.gov.tw/tpat1/tpatc/tpatengkm?0022C8B200040101000000000103200000003E000000000-B
	Novel nanoparticle containing siloxane polymers	UK		UK2091999		https://register.epo.org/application?number=EP07858337&lng=en&tab=legal
	Nanoparticle containing siloxane polymers	USA	US12/000,553 or US20080188032	US7,833,820	https://data.uspto.gov/patent-file-wrapper/search/details/12000553/application-data	
SILE33	집적 회로용의 실리콘 고함량 실록산 폴리머	South Korea	1020097019801	KR101647360	This patent provides functional polyorganosiloxane compositions designed for improved performance in electronic and coating applications. The technology enables enhanced material stability, processability, and functional properties through partially cross linked siloxane polymers stabilized in organic solvent systems. These compositions support reliable thin film formation with controlled molecular weight and silanol functionality, advancing semiconductor and optoelectronic device fabrication.	https://doi.org/10.8080/1020097019801
	積層電路用高シリコン含量矽氧烷聚合物	Taiwan	97103749	TW4434891		https://tponet.tipo.gov.tw/tpat1/tpatc/tpatengkm?007815310001010100000000010320000000100000000050
	集積回路用高シリコン含量シリキサンポリマー	Japan	2009-550737 or 2010-519375	JP5350276		https://www.j-platpat.inpit.go.jp/c1801/PU/JP-5350276/15/ja
	High silicon content siloxane polymers for integrated circuits	USA	US12/071,500 or US20080206578	US8,133,965	https://data.uspto.gov/patent-file-wrapper/search/details/12071500/application-data	
SILE36	Method of producing highly conformal coatings	Finland	20115325	F1123666	This patent describes a process for producing highly conformal siloxane based coatings with excellent coverage over complex structures. The technology leverages solvent engineered resin systems and controlled deposition methods to achieve uniform films with tailored refractive index and adhesion. It enables improved reliability and process uniformity in high aspect ratio applications, supporting advanced semiconductor and optoelectronic device fabrication.	https://patenttiteltopalvelu.prh.fi/en/patent/20115325/
	製造高度共形塗層の方法	Taiwan	10111856 or 201245353	TW1545162		https://tponet.tipo.gov.tw/tpat1/tpatc/tpatengkm?007815310004020100000000010320000000100000000050
SILE38	Silane monomers and high refractive index polymers derived therefrom	Finland	20115592	F1123292	This invention provides silane based monomers and polymers incorporating thianthrene moieties to achieve high refractive index materials. The technology enables enhanced optical performance through silicon or germanium frameworks functionalized with aromatic groups, delivering stable films with tunable refractive properties. These materials are suitable for photonic, display, and optical coating applications, supporting advanced semiconductor and optoelectronic device integration.	https://patenttiteltopalvelu.prh.fi/en/patent/20115592/
	Organometallic monomers and high refractive index polymers derived therefrom	USA	US14/126447 or US20140288260	US 9,190,616		https://data.uspto.gov/patent-file-wrapper/search/details/14126447/application-data
SILE39	Polymer composition and method of making the same	USA	US 13/489515 or US20120322010	US 8,952,121	This patent describes polymer compositions based on fluorene derived structures and methods for their preparation. The technology provides improved thermal stability, refractive index control, and film forming properties, making the materials suitable for semiconductor coatings, lithographic processes, and optical applications. These polymers enable reliable thin film integration with enhanced durability and process compatibility in advanced electronic and photonic systems.	https://data.uspto.gov/patent-file-wrapper/search/details/14126447/application-data