

1. Record Nr.	UNINA9910584592703321
Autore	Fett Theo
Titolo	Consequences of hydroxyl generation by the silica/water reaction : Part I: Diffusion and Swelling
Pubbl/distr/stampa	Karlsruhe, : KIT Scientific Publishing, 2022
ISBN	1000136481
Descrizione fisica	1 electronic resource (226 p.)
Collana	Schriftenreihe des Instituts für Angewandte Materialien, Karlsruher Institut für Technologie
Soggetti	Mechanical engineering & materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Water diffusing into silica surfaces gives rise for several effects on diffusion behaviour and mechanical properties. Water added to silica glass increases its specific volume so that the silica expands near the surface. Mechanical boundary conditions give rise for compressive "swelling stresses". This fact provides a tool for the interpretation of many experimental observations from literature.