Out-of-Equilibrium to In-Equilibrium Dynamics of SiO$_2$\textsuperscript{1} KATHARINA VOLLMAYR-LEE, JAKE ROMAN, Bucknell University, JUERGEN HORBACH, DLR, Koeln, Germany — We study the aging dynamics of SiO$_2$ (modeled by the BKS model) via molecular dynamics simulations. The system is well equilibrated at temperature $T_{\text{high}}$, then quenched to $T_{\text{low}}$ and observed after a waiting time $t_{\text{wait}}$. We present results for the structure factor, for the mean squared displacement, and for the intermediate scattering function. The resulting relaxation times show for the largest investigated $T_{\text{low}}$ that during the simulation run the system is first out-of equilibrium and then reaches equilibrium with relaxation times independent of $T_{\text{high}}$ and $t_{\text{wait}}$.

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