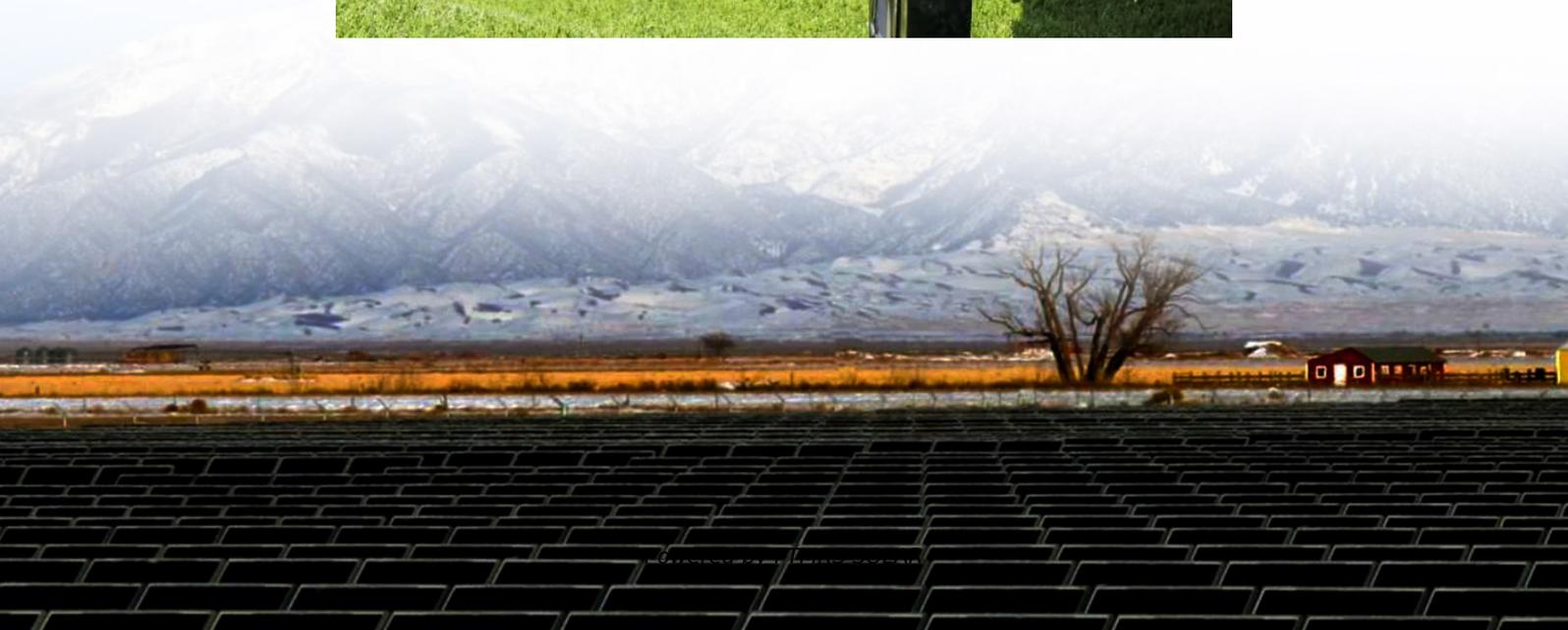


Elasticity of solar glass





Overview

What is glass elasticity?

Elasticity is strongly connected to the short- and medium-range order of glasses. A simple measurement of the elastic moduli of a glass can be the first step in analyzing its structure, and the first part of this chapter will focus on glass elasticity.

Does glass undergo nonlinear elasticity?

It must be underlined that the mechanical waves induced in the glass with these methods produce a ridiculously small stress, so that if the glass undergoes nonlinear elasticity, the methods only provide the elastic moduli at low stress (E_0), not E_1 and E_2).

Can we predict the elasticity of glasses based on their composition?

Additionally, even if we are still far from being able to predict the elastic moduli of glasses simply based on their composition, our understanding of the elasticity of glasses may provide a clue as to the structural peculiarities of glasses. Elasticity is strongly connected to the short- and medium-range order of glasses.

Which glass is considered a superstrate for a PV module?

We consider specialty thin glass (Corning Eagle XG®) as superstrate of the PV module, while a standard tempered Soda-Lime-Silica Glass (SLG) is considered as bottom support. The reliability calculations for the module were performed based on the stress magnitudes obtained from the FEA computations.



Elasticity of solar glass

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