Record Nr. UNINA9910513701203321 Autore Bernath Alexander Titolo Numerical prediction of curing and process-induced distortion of composite structures Pubbl/distr/stampa Karlsruhe, : KIT Scientific Publishing, 2021 1000125453 **ISBN** Descrizione fisica 1 electronic resource (296 p.) Collana Karlsruher Schriftenreihe Fahrzeugsystemtechnik Soggetti Mechanical engineering & materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Sommario/riassunto Fiber-reinforced materials offer a huge potential for lightweight design of load-bearing structures. However, high-volume production of such parts is still a challenge in terms of cost efficiency and competitiveness. Numerical process simulation can be used to analyze underlying mechanisms and to find a suitable process design. In this study, the curing process of the resin is investigated with regard to its influence on RTM mold filling and process-induced distortion.