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Titolo	Impact Behavior and Pedestrian Protection of Automotive Laminated Windshield : Theories, Experiments and Numerical Simulations / / by Jun Xu, Yibing Li
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ISBN	981-13-2441-7
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Descrizione fisica	1 online resource (x, 272 pages) : illustrations
Disciplina	629.231
Soggetti	Automotive engineering Mechanics Building materials Engineering design Automotive Engineering Classical Mechanics Structural Materials Engineering Design
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Background -- Manufacturing of automotive laminated windshield -- Mechanical behavior of the laminated glass -- Constitutive modeling of laminated glass -- Crack initiation and propagation in laminated glass upon the small mass impact -- Full-scale PVB laminated windshield impact experiment by headform -- Numerical simulation on the crack propagation in laminated windshield -- Numerical modeling of the PVB laminated windshield -- Pedestrian protection and energy dissipation of laminated windshield -- Accident reconstruction based on the debris on laminated windshield upon human head impact -- Concluding remarks.
Sommario/riassunto	This book addresses one of the most important components for pedestrian safety in vehicles – laminated windshields. It includes detailed real-world material characterization results for laminated glass and testing methodologies, constitutive models, and step-by-step numerical simulation modeling and simulation methods. As such, the

book provides readers a thorough understanding of the mechanical behaviors of laminated glass and windshields. It also presents fundamental test data, analysis methodologies and essential insights into laminated glass safety design and mechanical behavior prediction. The book addresses the needs of researchers, engineers and postgraduate students in the fields of automotive engineering, mechanical engineering and related areas.