Bridgestone Corporation
Development of Non-Food Biomasses Based Biodegrade Rubber Compound in Wear Particle for Tire

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【Contents】 We are trying to develop non-food biomasses based multi-lock tough polymer which can be decomposed by multiple stimuli. Combined with the toughness technology by energy dissipation cultivated in ImPACT project (2014-2019), the developed tough polymer is applied to tire tread, and it demonstrates toughness by energy dissipation in use and quickly decomposes by multiple stimuli (microorganism and combination of light, heat, oxygen, etc.) after use in the state of wear particle. Tires that have less influence on marine microplastics will be expected.

【Progress】 This theme consists of (1) development of non-food biomasses based biopolymer synthesis, (2) development of multi-lock degradability technology and (3) development of degradability evaluation method/degradability behavior analysis method. In collaboration with academia which develops common basic technology, we are proceeding with studies on toughness by energy dissipation and biodegradation.