A cover for the single-person pedal-powered vehicle

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Introduction

Recently a growing number of people have taken up a hobby of riding bicycles, provided that the condition is favorable. Unfortunately, as soon as you set off on your bicycle, you may encounter so many difficulties: you find yourself so vulnerable compared with the automobiles; heavy winds or rain can spoil your day; etc. One typical way to get rid of these difficulties is to protect the bicycle and cyclist with a cover.

So far, considerable efforts have been paid to this kind of work. A group of aerodynamicists has published simulation models of the would-be shape of the cover[1]. Several experimental teams have had such models constructed and put to test[2], which has singled out two excellent models[3]. Some engineers working in car factories have introduced the idea of the ventilation system. More work is needed still, however, to find the appropriate materials to construct the cover.

To be a cover for a single-person pedal-powered vehicle, the material should not be too heavy for a single person's pedal power. Some light materials have been developed in several laboratories[4]. Even so, as far as the security is concerned, a slighter weight without extra protections can result in serious danger.

In this paper, we introduce our discovery of a new kind of polymer that forms a suitable material of the cover to offer the cyclist an extra protection. This kind of light material is capable of absorbing a large amount of kinetic energy without too much changing its original shape when something hit it with sudden force, due to the specific spatial structure of its molecule. With the protection of this kind of material, we are assured of the promising future of covered single-person pedal-powered vehicles.

Table of References

[1] Author names, *Article Title*, *Journal Name*, Year, Pages.

[2] Author names, *Article Titles*, *Journal Name*, Year, Pages.

[3] Author names, *Article Title*, *Journal Name*, Year, Pages.

[4] Author names, *Article Titles*, *Journal Name*, Year, Pages.