System of Capturing Carbon Dioxide in Factories and Transportation

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When we started our project, we looked for a material which can capture carbon dioxide. We had many choices , we studied the possibility of using all the those choices , we selected the most suitable one, our choice was Chitin Acetate dissolved in Dimethyl Sulfoxide (CA/DMSO). Then we started making a system which aims at using this material in transportation and factories. As the transportation always moves, applying the system of capturing is more complicated. Also, because the application process of this project needs enough space, we thought of applying it on trucks, big transportation and factories. The system, which we designed , deals with the change of temperature between summer and winter, the temperature of emitted gases, the sorbent movement in the system,ensuring that system will be a discrete part in the transportation and the efficiency of capturing. As for the feasibility study. The material which is used in our project is renewable, globally abundant and at a reasonable cost. On one hand, when we talk about an environmental project, we don't focus too much on the profitability of the project as far as we focus on environmental benefits. On the other hand, since the material is renewable, we can use it again and for the same purpose, and investment in carbon dioxide by using it in many fields such as Firefighting, in agriculture (Production of urea), conditioning and cooling and in laboratories which means that the project will have economic returns and benefits, consequently becoming profitable if it is applied on the long-run These are the highlighted points, of course, our project has more and more details.

Awards Won: