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Wearable jacket design with reflector effect created by flexible solar panels

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For the people who are in traffic, or travelling by foot or by bicycles, and who need to be noticed in the traffic, it is possible to recognize them after sunset with the help of some tools. These awareness devices may be reflector-specific and hand-held devices, as well as some pointing devices that are placed in the position where they are located, or in the case where they are in motion. The feature of reflector operationalizes by using or directing the incoming light. Therefore, it should light on the object. The lights used by the vehicles in traffic illuminate the way. However, the reflector feature will be ineffective if there is a defect in the lighting equipment, or in the absence of illumination of vehicles or if there is no source of light in the way the pedestrians are travelling. For this reason, an alternative to the reflector feature can be used by integrating a solar panel on the outfit. As long as the sun is effective, the energy obtained is stored in a battery, and finally it uses stored energy by using a light source that is also self-luminous on the outfit. The design of the outfit should be in such a way that there is a section of reflector feature and a section that gives light enough to be noticed. It is therefore possible to make heating with a control mechanism, and resistance, which can be integrated according to the efficiency ratio of the energy obtained and without ergonomics of the garment intact.

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Research about the potential use of agricultural waste and medicinal plants extracts to obtain bio-stimulants for plants, in term to increase the quality of agricultural crops

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The idea developed in this project started several years ago when there have been extensive studies on the potential of obtaining bio fertilizers from waste plant mass after harvesting crops. Experimental products were obtained rich in nutrients, but unstable in terms of existing microorganisms. Therefore, they conducted further studies obtaining bio fungicide herb, so in all investigations undertaken so far in the laboratory, were able to conclude the following: vegetable material remaining after harvesting of crops is a resource rich in mineral nutrients, which can be obtained by bio degradation under the influence of microorganisms of the genus *Trichoderma* sp. and *Aspergillus* sp. Herbs (which are sometimes weeds in crops) are, on the other hand, a resource of antibiotics that can be used for combating diseases and pests of agricultural and horticultural crops, and, by the introduction of plant extracts with fungicidal effect obtained from herbs in bio fertilizers obtained by degradation of plant material post-harvest, we obtained various stimulants plant with nourishing and plant the crops and horticulture. In this project, we have two partners, Agricultural Research and Development Station of Braila and "Dunarea de Jos" University from Galati, Faculty of Engineering and Agriculture of Braila. By the partnership with the university, we seek design platform of bio degradation determine the most effective technology for these stimulants for plant and methods of the most economical in terms of energy for performing treatments in the field. By partnership with SCDA Braila, it is aimed at testing bio stimulants plant under experimental conditions and production. The project coordinator has the ability to get bio stimulants for different categories of crops and facilitate to secure their markets - by implementing the project which will be both patented technology of bio-stimulants (platform for bio degradation) and biological products obtained. In the first stage, we made experiences in fields for three winter crops (wheat, barley and rape) and for three spring crops (corn, sunflower, soybean), with different doses of the bio-stimulants, and in two sub-experiences: with two and three applications.

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