



## Silver nanoparticles in carbon fiber-reinforced polymer material for mitigation of laser and thermal damage induced by irradiation

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### Abstract:

Cork material could be a component in various solar energy systems/ devices for increasing its domain of applications. Cork processing is a sector where solar energy may be used in various ways. Cork harvesting and processing have several and different operational steps in which electricity, heat and thermal fluids are necessary and exist in world areas where solar radiation is high. Different types of existing solar technologies are considered for the specific steps of cork transformation. The use of different cork derived products in several solar energy technologies and applications is also possible. Most of

these technologies and applications are not yet being used. Several possibilities of utilization of renewable solar energy in the cork sector are proposed or described. The existing solar technologies may have to be integrated and adapted to the particular features of cork processing. Cork products have a wide range of applications, and now some new applications in the solar energy field are being studied. Due to the fact that cork is produced and processed in regions where solar radiation is high, this sector can be a good example of solar energy application in forest based systems. So, an alternative renewable energy source related to an ecologically-friendly manufacturing process of products based on a natural material is discussed.

### Biography:

Luis Gil has a background in Chemical Engineering and currently he is a Senior Researcher qualified for coordination functions working at the General Directorate of Energy and Geology, Lisbon, Portugal. In the last 33 years he has developed work on the technology of natural materials with a shift in the last years to renewable energy and materials applications in this field. He is the author of several patents and technical books, books and encyclopedia chapters, papers, presentations in scientific events and has several national and international awards. He was the Vice-President of the Portuguese Materials Society, and is a Counselor Member of the Portuguese Engineers Association and member of several editorial boards of technical-scientific publications.