

## **Abstract**

Conductive polymers are of great importance in the field of materials science and are among the modern materials that have an effective role in many technological applications. Developing them and working to improve their production methods and physical properties is very useful in making these materials suitable for different applications. In terms of the manufacturing method, we work to use green, environmentally friendly methods in producing these conductive polymers, as well as reducing manufacturing costs. Methods of manufacturing thin films from these polymers suffer greatly from the difficulty of producing high-quality thin films, in addition to losses in materials and increased economic costs. Improving the properties has a major role in the possibility of using these materials in various applications, by working on mixing polymers with the appropriate elements, as well as doping them and using appropriate mixing and doping methods. In my humble opinion, the best methods for mixing and manufacturing are the spin coating method and the chemical bath method.

best wishes

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26/1/2024