

STUDY ON APPLICATION OF THIN OXIDE LAYERS AND NEW SENSITIZERS IN DYE SOLAR CELLS

Katarzyna JUREK, Janina KABATC

ABSTRACT *The production of greenhouse gases by increasing consumption of fossil fuels, exacerbating the problem of global warming and the risk of quality of life on Earth. Therefore, a necessary and important is the use of renewable energy sources such as solar energy to maintain a sustainable social and economic development. According to the Directive 2009/28/EC of the European Parliament and the Council, it is necessary to increase the share of renewable energy to 20% by the countries of the EU to 2020. This results in the searching of the new energy sources from natural sources. It can be achieved by the application of the solar radiation as a source of electrical energy conversion processes in solar cells. They are looking for new systems containing dyes, exhibiting a wide range of absorption of electromagnetic radiation. The optimum sensybilizators for the DSSC technology are the so-called panchromatic dyes.*

Keywords: *binary oxide system, sensitizers, solar light conversion*