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Author Chin Chuan Tu
Author's Email Address No Public.
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Abstract
Energy gradually uses up and consciousness of environmental protection have many countries seek other substitution energy such as wind, hydro and solar . Solar, either positive energy application technology development, is most complete. Popularly, the solar energy collection heat (Solar collector) is the rank of first. Taiwan's geographical condition and the climate mostly suit the development of solar energy because of locating the subtropics area ; South central is located nearby the Tropic of Cancer ; Average temperature is high and there is few amount of rainfall with longer the sun sunshine time, It quietly suits the development of solar energy. The solar energy collection heat equipment costs high and is on the collection hot plate material of and the technical cost solar energy selective absorption membrane is unable to reduce ; therefore it causes the popular rate to be unable further to promote. The purpose of thesis is to utilize the gelatin method that produces nano structure making solar energy optics selective absorption membrane and develop the optics reflection measuring instrument which enable to
low equipment cost and make processing easy. This research employs hydrate, manganous acetate, cupric chloride, cobaltous chloride to separately dissolves to the ethyl alcohol (95%, 99.5%) ; the methyl alcohol ; the glycol under ; heats up in the uniform temperature stirs, the acetate and the alcohol type carry on the polymerization of the gelatin. By the different proportion sodium hydroxide promotion polyreaction and the dilute solution. It joins the different proportion again the third sheep base cellulose and assists soaks spreads the cloth law (dip coating) to be able the smooth coating. Spreading the base material with stainless carries on bakes the legal system to complete the solar energy optics selective absorption membrane. Simultaneously, it develops the ball absorption metering equipment and improvement optics reflection measuring instrument. After the test, the thin film absorption rate is 0.93, but the heat radiation gathers comes out 0.33. In addition, for understanding chemistry of turning point gelatin polymerization, by FTIR and TGA of discussion gelatin polymerization, the change of situation chemistry function base and the ingredient weight are taken the adjustment formula and the reference for modification..
Keywords： sol-gel、 solar absorbance、 thermal emittance、FTIR、TGA
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