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| **Abstract:** |  |
| This paper presents a cost efficient Solar Charge Controller (SCC) using Programmable Intelligent Controller (PIC) to control and coordinate the functions properly. Details of design for the construction of SCC using crystal oscillator, optocoupler, ceramic resistors, LC filters, and MOSFET are presented. The source code for the PIC microcontroller is written in C to obtain accurate and efficient disconnecting/reconnecting action automatically. Accordingly,  battery can be disconnected from solar cell when overcharging and reconnected while under discharging. The loads can be disconnected according the over current and under flow current limit. Loads can also be disconnected for over current and under current. The proposed charge controller is equipped with Liquid Crystal Display (LCD) to display the battery charging status and amount of current flown from solar cell to load via microcontroller. The construction and operation of our proposed this smart solar charge controller indicates that it is more cost effective and functions properly. | |