Greenhouse Design and Control

Pedro Ponce, Arturo Molina, Paul Cepeda, Esther Lugo, Brian MacCleery
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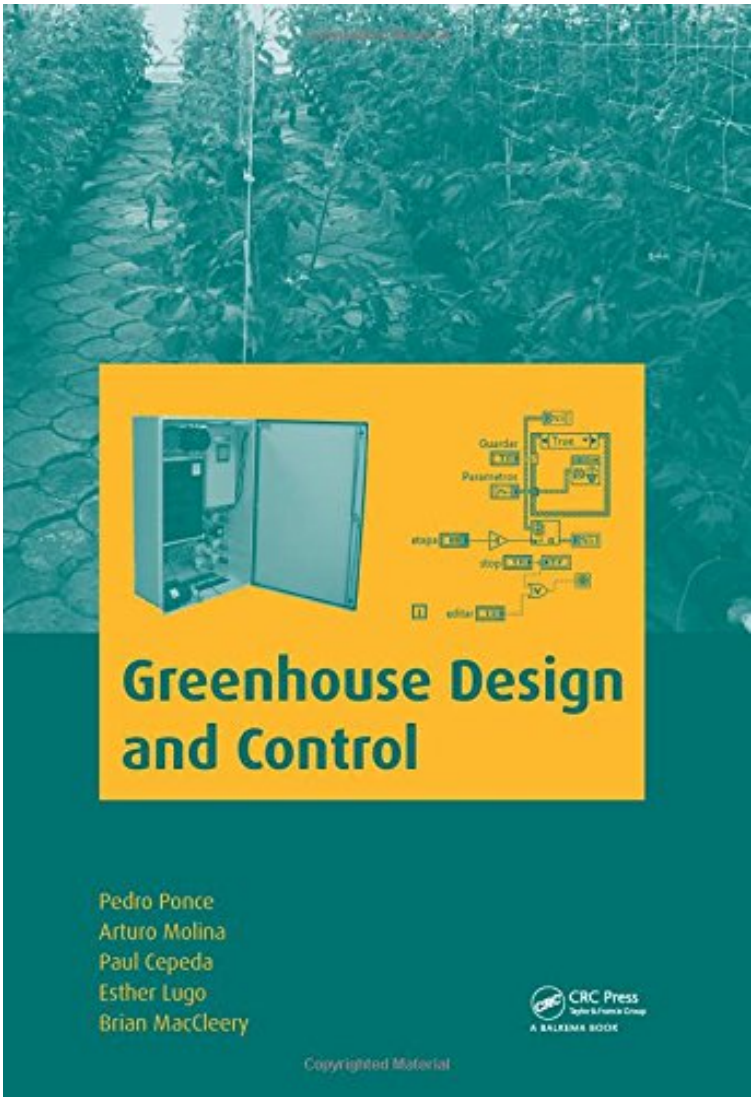

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Pedro Ponce, Arturo Molina, Paul Cepeda, Esther Lugo, Brian MacCleery : Greenhouse Design and Control before purchasing it in order to gage whether or not it would be worth my time, and all praised Greenhouse Design and Control:

Agricultural production is one of the main keys to the development of healthy societies. It is anticipated that agricultural systems will increasingly have to contend with temperature, humidity and water stress in the near future. This makes the need to increase the efficiency of land and water use ever more urgent. The control and design of

greenhouses allows to increase dramatically the quality of crops and extend the cultivation period year-round. A properly designed autonomous greenhouse based on hydroponics can greatly reduce the amounts of nutrients and energy expended in agricultural production. This book deals with different types of greenhouses, materials, structures, advanced control techniques and tendencies that are needed for designing and controlling an advanced greenhouse. The control system is presented as an integral system which covers the explanation of basic and advanced concepts for a real time controller. Also, structural analysis is introduced, whereby mechanical design is regarded as a key factor. The book incorporates simulations and experimental results, and utilizes LabVIEW and ADAMS software. Finally, it provides a perspective on the present state and future of greenhouses globally. Written in a highly accessible manner, this book will prove useful to horticulturalists, agricultural engineers, greenhouse engineers and designers. Its easy-to-absorb contents are also suitable for (under)graduate students and researchers in agricultural and electronic engineering, horticulture, crop cultivation and soft computing.