Preface

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Climate change is one of the most challenging issues faced by human beings. Although many remarkable achievements have been made in climate change research, there is still a tremendous amount of uncertainty in the field. Comprehensive and rational understanding of climate change processes and mechanisms, assessment of future climate change, and formulating proper mitigation policy are all still a long way from realization. These uncertainties make the climate change problem extremely complicated, requiring interdisciplinary exploration.

In this context, the Chinese Academy of Sciences (CAS) has established the Climate Change Research Center (CCRC), with a goal to offer better opportunities for comprehensive climate change research, with a main focus on East Asia, and to provide the best knowledge on climate change to policy makers and the general public. The CCRC is hosted by the Institute of Atmospheric Physics (IAP), and, as the Director-General of IAP, I was appointed as Director of CCRC. The research strategy of the CCRC is to develop knowledge from observational analysis and numerical modeling within five areas: climate model development; the course and causes of historical climate change; projections of future climate change; impacts of climate change and adaptations; and climate change mitigation policy and technology.

This special issue has been prepared firstly to celebrate the foundation of the CCRC, and secondly to gather together a selection of papers which demonstrate the very latest findings by Chinese scientists in the climate change area; the culmination of two decades' worth of great achievements in this field. The papers—nineteen in total, and written by scientists from the IAP and other institutions—cover various hot topics in climate change, and serve as a significant milestone for the CCRC, as well as climate change research in China as a whole.

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