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# China's First Dedicated Carbon Satellite Mission (TanSat)

Guest Editors:

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**Prof. Daren Lyu**

Deadline for manuscript submissions:
**closed (15 August 2023)**

## Message from the Guest Editors

In China, a series of ambitious projects aiming to mitigate carbon emissions have been in effect for the last 15 years, including the first Chinese greenhouse gas monitoring satellite mission (TanSat).

This Special Issue will provide an overview of the latest progress and research on TanSat measurement, focusing especially on the satellite and instrument technics, retrieval algorithm, data application, and calibration/validation. TanSat is China's first carbon satellite providing XCO2 measurement to scientific research on the global carbon cycle. The next generation of the TanSat mission is current in the design phase, whose goal is to support global stocktake and China's carbon peaking and carbon neutrality goals.

We are inviting contributions on new scientific results on topics such as:

Measurement technics, incl. satellite and instrument performance;
Retrieval algorithm and XCO2 data product;
Carbon flux inversion and data assimilation;
TanSat data application, e.g., CO2 emission/sink investigation;
Val/Cal for TanSat measurement.

Papers that exploit TanSat data application in global and regional carbon monitoring research are especially encouraged.

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## Message from the Editorial Board

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