Preface

Chemosensors are generally based on molecules or molecular systems showing responses to the analytes and producing the detectable signals. Accordingly, chemosensors can be used to detect analytes qualitatively and quantitatively. Development of new sensors with high sensitivity and selectivity is necessary for many areas such as earlier diagnosis of diseases, food safety and even anti-terror. For this reason, studies of sensors have received more and more attention in recent years. Besides selectivity and sensitivity, more efforts have been devoted to the development of sensing systems which can be used in aqueous solution and solid-state chemo-/biosensors.

In order to highlight the recent progress on the chemo-/biosensors in research institutions and universities in China, the editors of *Science in China Series B: Chemistry* agreed to publish a special issue on this topic. This special issue collects 21 papers including 2 review articles and 19 research papers. The review articles discuss sensors based on conjugated molecules and 5-methoxy-2-(2-pyridyl)thiazole derivatives as well as gold nanoparticles by manipulating the corresponding photoinduced electron-transfer and energy-transfer processes. Several research papers report new cation and anion sensors in terms of new receptor groups, new reporter groups and new signal-transduction mechanisms. It is interesting to note that new sensing systems have been developed by making use of the aggregation-

induced emission (AIE) phenomenon. Biosensors for detection of biologically interesting molecules such as ATP, saccharides and DNA are described in several papers of this special issue. In particular, this special issue contains reports on the thin-film fluorescent sensor and the FET (field-effect-transistor)-based sensor. In short, this special issue demonstrates a cross-section of the current research activities about chemo-/biosensors in China.

Editing this special issue for *Science in China Series B: Chemistry* has been both honor and pleasure. Obviously, the progress on molecular chemo-/biosensors in China cannot be comprehensively covered in a single journal issue, and we apologize sincerely to those who might feel their work has been omitted. We hope the issue could provide a unique and initiative opportunity for the scientists in this area to exchange ideas and share in the achievements. Special thanks go to Prof. ZHANG DeQing (Institute of Chemistry, CAS), Dr. ZHU XiaoWen (Chief of the Editorial Office) and the editorial office of *Science in China Series B: Chemistry* for valuable support and guidance in the preparation of this special issue.

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doi: 10.1007/s11426-009-0147-3