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Editorial: Smart urban environmental health from multi-scale, multimedia, multi-exposure, multi-target (4M) perspectives, volume II

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Editorial on the Research Topic

Smart urban environmental health from multi-scale, multimedia, multi-exposure, multi-target (4M) perspectives, volume II

Urbanized areas have become the geographic focus of resource consumption and chemical emissions. Pollutants among the urban environmental multi-media (including water, soil, air, etc.) are intensifying, causing chronic public health risks and an increase in hazards via multi-exposure pathways and multi-scale distribution differences. Environmental Health Risk Management (EHRM) now was widely used as a multi-disciplinary policy tool, which mainly are the components of hazard identification, exposure assessment, dose-response assessment, risk characterization, and risk countermeasures. This Research Topic aims to provide a platform for researchers committed to the progress of progress of smart multi-scale, multimedia, multi-exposure, multi-target environmental health risk monitoring, assessment, and management around the world. As a result, the topic has garnered significant attention, generating a total of seven multidisciplinary articles.

In this Research Topic, contributors included a team mainly from Chinese Center for Disease Control and Prevention published their Leukemia risk assessment of low-levels benzene exposure based on the linearized multistage model (Jin et al.); and another team from Chongqing General Hospital and Sichuan University explored to develop a new model of identifying the biological indicators for human exposure toxicology based on public health data and deep learning (Gao et al.). Furthermore, the study by Chen et al. proposed community planning optimization strategy guided by environmental hygiene and public health, in order to ensure the physical and mental health of residents. Another study by Liu et al. from the Wuhan University of Science and Technology established a data detection system for urban public health environment based on intelligent multi-objective and develop some targeted intelligent management system was developed to monitor and regulate. From a 4M (human, machine, materials, methods) perspective, Yuan et al. developed a public health prediction model based on

deep neural networks for addressing the challenges of public health in smart city. Besides, [Liu et al.](#) from Neijiang Normal University and Chengdu University of Technology evaluated the impact of mega-city construction engineering on urban livability in the Yan'an City.

This Research Topic not only serves as a timely reference for academics but also provides practical insights for decision-makers concerned with smart urban environmental health management. We would like to express our sincere gratitude to the members of the Editorial Board, all authors and co-authors, and the referees for their valuable contributions. Furthermore, these impactful publications would not have been possible without the efficient support of the Journal Office.

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