

中国室内挥发性有机物污染特征

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摘要:近年来室内空气污染问题频发, 已引起全社会的广泛关注。挥发性有机物 (volatile organic compounds, VOCs) 是室内空气的主要污染物之一, 其成分复杂, 来源广泛, 严重威胁人体健康。本文综述了中国近十年来室内 VOCs 在来源、浓度水平、影响因素及健康评价方面的研究进展。研究表明, 室内建筑装饰材料、人类活动及室外污染等来源都会影响 VOCs 的室内浓度; 中国住宅内甲醛、苯等 VOCs 污染普遍存在, 家具市场是甲醛污染最高的公共场所; VOCs 浓度受到温湿度、通风和装修时间等因素影响; 中国室内部分 VOCs 对人体健康影响评估值超过美国环保署可接受水平。调查更全面的室内 VOCs 数据, 探索对各类因素影响机制, 提出更有效降低 VOCs 对人体健康影响的措施将是未来室内空气治理重点发展方向。

关键词:挥发性有机物 (VOCs); 浓度特征; 来源; 健康影响评估

Characteristics of indoor volatile organic compounds in China

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Abstract: Background, aim, and scope In recent years, indoor air pollution is getting more and more serious, which has been paid more attention by the whole society. Volatile organic compounds (VOCs) which are the most abundant indoor pollutants can be emitted by a wide range of sources and it is harmful for human health. The aim of this paper is making an overview of advance in characteristics of indoor VOCs in China. **Materials and methods** This paper reviews studies over the last decades on the characteristics of indoor VOCs concentration, impact factors and human health risk assessment. **Results** The building materials and decorations, the human activities and outdoor pollution are the main sources of indoor VOCs. Formaldehyde, benzene, toluene and xylenes of some studies in China remained at a high percentage of total VOCs concentration in brand new decorated residences that had exceeded the national indoor air quality standard. Meanwhile, the public places, such as furniture market, shopping mall and hotel have seriously air pollution problems. Some researches

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