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城市不同下垫面径流中PAHs污染特征及源辨析

Pollution characteristics and source identification of PAHs in urban runoff from different surfaces

关键词: [下垫面](#) [径流](#) [PAHs](#) [污染特征](#) [源辨析](#)

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摘要: 选取温州典型不透水地面类型小区路面、停车场、汇流口、小区屋面及交通干道,采集径流样品,研究了夏季常见雨型条件下不同下垫面径流中PAHs的污染特征,并对其中的PAHs来源进行了分析.结果表明,初期有较大雨强的雨型对交通干道及停车场径流中PAHs冲刷更加明显;径流中PAHs在颗粒相/水相间的分配系数随着颗粒物的增加而降低,这可能跟径流中颗粒物组成有关;运用因子分析和多元回归方法解析可以看出,不同下垫面径流中PAHs的来源:主要集中在煤、石油等的不完全燃烧\石油类泄漏\炼焦等因素,各源在径流中贡献率存在差异;BaA/CHR比值大部分>0.6,显示径流中PAHs主要来源于本地污染源,但初期径流中比值较低,说明大气沉降对本地PAHs污染也有一定贡献

Abstract: Runoff samples from residential road, parking lot, junction area, roof and main transport road were collected in a typical rain event in summer in Wenzhou. Pollution characteristics of PAHs were investigated in urban runoff samples from different surfaces. PAH sources were analyzed using factor analysis and multiple regression analysis. The results showed that PAHs in runoff from main transport road and parking lot could be flushed more easily in the initial runoff with a higher rain intensity. Partition coefficients decreased with the TSS contents, which could be related with the particles size distribution patterns in the runoff samples. PAHs sources were mainly the incomplete combustion of coal, oil, etc., oil leakage and coking, and the contribution of each source was different in runoff from different surfaces. The specific values of BaA/CHR were mostly above 0.6, which exhibited that the main sources of PAHs were local pollution. In addition, aerial deposition had a certain contribution to PAHs because BaA/CHR ratios were relatively lower in the initial runoff.

Key words: [surface](#) [runoff](#) [PAHs](#) [pollution characteristic](#) [source identification](#)

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