

研究报告

乌梁素海沉积物中有机质和全氮含量分布特征

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摘要

针对乌梁素海富营养化日趋严重和湿地面积逐渐萎缩,系统地研究了其生态环境地球化学效应.结果表明,乌梁素海表层沉积物中的全氮含量存在明显的经向和纬向分异特征;沉积物中全氮养分含量与有机质含量显著相关($r > 0.93$);沉积物中C/N的平均值介于12.07~19.95之间,表明有机质主要来源于湖中水生植物,水体富营养化具有显著的内源性.TN和有机质在不同粒级表层沉积物中的粒度效应明显,且TN和有机质在IV粒级的含量分别为I粒级的3.1~7.6倍和2.5~8.0倍.

关键词 [乌梁素海](#) [全氮](#) [有机质](#) [分布特征](#) [粒度效应](#)

分类号

Distribution characteristics of organic matter and total nitrogen in sediments of Lake Wuliangsu hai

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Abstract

Lake Wuliangsu hai is one of the representative inland freshwater lakes in grassland areas of China, and its shrinking and eutrophication is becoming more serious. The study on the ecological and environmental effects of the shrinking and eutrophication revealed that the total nitrogen (TN) content in the surface sediment of the lake had an obvious differentiation both in longitudinal and in latitudinal direction, and had a significant correlation with organic matter content. The mean C/N ratio of the sediment ranged from 12.07 to 19.95, which meant that the organic matter was mainly come from the hydrophytes of the lake, and the eutrophication of the lake was mostly caused by its internal load. Both TN and organic matter had a clear grain size effect in different fractions of grain sizes of surface sediment, and their contents in IV (<63 μm) were as 3.1~7.6 and 2.5~8.0 times as those in I (>250 μm), respectively.

Key words

[Lake Wuliangsu hai](#) [Total nitrogen](#) [Organic matter](#) [Distribution characteristics](#) [Grain-size effect](#)

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