

# 华北水利水电大学学报

## (自然科学版)

第 42 卷第 3 期

(1980 年创刊)

2021 年 6 月

### 目 次

#### 专家特约稿

- 水科学交叉学科群建设的必要性及基本框架 ..... 左其亭 (1)  
结构水资源学概论 ..... 金菊良, 周戎星, 崔毅, 陈梦璐 (7)

#### 全球陆地水循环与江河水文情势专题

(策划、组稿:南京水利科学研究院 王国庆教授)

- 密苏里河流域水文特性及其对气候要素变化的响应 ..... 孙晋秋, 陆晨越, 宁忠瑞, 刘艳丽, 白林龙, 王国庆 (20)  
1951—2015 年叶尼塞河流域水文气象要素演变特征 ..... 郑雨凝, 李杨, 鞠琴, 宁忠瑞, 王国庆, 鲍振鑫 (27)  
尼亚加拉河 1951—2016 年水文气象要素演变特征及其响应性 ..... 汪琳, 龚丽飞, 李杨, 舒章康, 李晨希, 贺瑞敏 (33)  
1951—2007 年墨累-达令流域水文气象要素演变 ..... 陆晨越, 杜付然, 孙晋秋, 徐斌, 黄福贵, 刘翠善 (41)  
尼日尔河水文气象要素演变特征及趋势 ..... 胡一帆, 刘颖, 李杨, 李文鑫, 李小平, 薛运宏 (49)  
多瑙河流域水文气象要素演变及响应关系 ..... 辛昱昊, 刘颖, 宁忠瑞, 鞠琴, 张晓华, 王鸿杰 (57)  
1951—2016 年哥伦比亚河流域水文气象要素演变特征分析 ..... 李文鑫, 王兴泽, 孙晋秋, 李杨, 刘颖, 鞠琴 (64)  
海河南拒马河流域水文特性及 HBV 模型的应用 ..... 王乐扬, 李清洲, 王艳君, 姜彤, 李晨希 (70)

#### 水资源与水环境

- 基于 SPEI 指数的河北省多尺度旱涝特征分析 ..... 曹永强, 宁月, 李玲慧, 路洁, 张若凝 (76)  
水资源空间均衡评价的联系数-耦合协调度模型及应用 ..... 缪昭旺, 吴成国, 崔毅, 张礼兵, 王晓宇, 白夏 (86)  
基于最大日负荷量的潜江市河渠水网黑臭水体治理研究 ..... 陈阔, 冯健, 赵进勇, 彭文启, 付意成 (96)  
灌区地下水作为生活饮用水的适宜性演变规律分析 ..... 刘中培, 张冬青, 韩宇平, 冯邵依, 冷静 (103)

基本参数:CN41-1432/TV \* 1980 \* b \* A4 \* 108 \* zh \* P \* ¥20.00 \* 1500 \* 14 \* 2021-06-25  
执行编辑:乔翠平

**JOURNAL OF NORTH CHINA UNIVERSITY OF WATER  
RESOURCES AND ELECTRIC POWER  
( NATURAL SCIENCE EDITION )**

Vol. 42 No. 3

( Started in 1980 )

( Jun. 2021 )

**CONTENTS**

The Necessity and Basic Framework of Construction of Interdisciplinary Group of Water Science .....	ZUO Qiting( 1 )
Introduction to Structural Water Resources Science .....	JIN Juliang, ZHOU Rongxing, CUI Yi, CHEN Menglu( 7 )
Hydrological Characteristics of the Missouri River Basin and Its Response to Changes in Meteorological Variables .....	SUN Jinqiu, LU Chenyue, NING Zhongrui, LIU Yanli, BAI Linlong, WANG Guoqing( 20 )
Evolution Characteristics of Hydrometeorological Elements in the Yenisei River Basin from 1951 to 2015 .....	ZHENG Yunling, LI Yang, JU Qin, NING Zhongrui, WANG Guoqing, BAO Zhenxin( 27 )
The Evolution Characteristics and Responsiveness of Hydrometeorological Elements of the Niagara River from 1951 to 2016 .....	WANG Lin, GONG Lifei, LI Yang, SHU Zhangkang, LI Chenxi, HE Ruimin( 33 )
Evolution of Hydrometeorological Elements in the Murray-Darling Basin from 1951 to 2007 .....	LU Chenyue, DU Furan, SUN Jinqiu, XU Bin, HUANG Fugui, LIU Cuishan( 41 )
Evolution Characteristics and Trends of Hydrometeorological Elements in the Niger River Basin .....	HU Yifan, LIU Ying, LI Yang, LI Wenxin, LI Xiaoping, XUE Yunhong( 49 )
Evolution and Corresponding Relationship of Hydro-meteorological Elements Series in the Danube River Basin .....	XIN Yuhan, LIU Ying, NING Zhongrui, JU Qin, ZHANG Xiaohua, WANG Hongjie( 57 )
Variation Characteristics of Climatic and Hydrological Elements in the Columbia River Basin from 1951 to 2016 .....	LI Wenxin, WANG Xingze, SUN Jinqiu, LI Yang, LIU Ying, JU Qin( 64 )
Hydrological Characteristics and Application of the HBV Model in the South Juma River Catchment in the Hai River Basin .....	WANG Yueyang, LI Qingzhou, WANG Yanjun, JIANG Tong, LI Chenxi( 70 )
Analysis of the Characteristics of Drought and Flood in Hebei Province Based on SPEI Index .....	CAO Yongqiang, NING Yue, LI Linghui, LU Jie, ZHANG Ruoning( 76 )
Connection Number and Coupling Coordination Degree Model and Application of Water Resources Spatial Equilibrium Evaluation Analysis .....	MIAO Zhaowang, WU Chengguo, CUI Yi, ZHANG Libing, WANG Xiaoyu, BAI Xia( 86 )
Research on the Treatment of Black and Odorous Water Bodies in Canal Network of Qianjiang City Based on Total Maximum Daily Load .....	CHEN Kuo, FENG Jian, ZHAO Jinyong, PENG Wenqi, FU Yicheng( 96 )
Evolution Analysis of Groundwater Used as Domestic and Drinking Water in Irrigated Area .....	LIU Zhongpei, ZHANG Dongqing, HAN Yuping, FENG Shaoyi, LENG Jing( 103 )