



ISSN 0371-5736



GEOLOGICAL REVIEW

第 60 卷 第 1 期

Vol.60 No.1

2014



中 国 地 质 学 会 主 办
《地质论评》编辑委员会 编 辑
科 学 出 版 社 出 版

Groundwater Environmental Geological Problems and Preventive Treatment
in Guanzhong Urban Agglomeration

TAO Hong, DING Jia

Geo-Environment Monitoring General Station of Shaanxi Province, Xi'an, 710054

Abstract: The ground water level has been declining since the concentrated exploitation of groundwater in Guanzhong urban agglomeration. The declining amplitude of it is 30 ~50m in major water source, with a maximum more than 120 m. Long term excessive exploitation of groundwater has caused a continuous decline in groundwater level, ground subsidence, ground fissure, water pollution and other environmental geological problems. In recent years, the exploitation control on groundwater in urban agglomeration is relieving the continuous decline in groundwater level and the related local environment geological problems. This paper based on 50 year monitoring data of groundwater dynamics, studied in dynamic characteristics of groundwater and related environmental geological problems, proposed suggestions for prevention and mitigation of environmental geological problems and development of groundwater.

Key words: groundwater mining; environment geological problems; precaution; Guanzhong urban agglomeration

GEOLOGICAL REVIEW

Vol. 60 No. 1 2014

CONTENTS

Scientific Review

Ocean—Continent Transition Process Reveled by Worldwide Comparison of Crust and Upper Mantle Structures	YANG Wencai, SONG Haibin(20)
Development and Problems of Regional Crustal Stability Assessment Study Companying with Discussion of the Specification Compilation	YAO Xin(30)
The Application Progress of Water-laid Deposits Luminescence Dating	ZHAO Qiuyue, WEI Mingjian, ZHOU Rui, SONG Bo, PAN Baolin(38)
Subaqueous Debris Flow: Hotspots and Advances of Deep-water Sedimentation	XIAN Benzhong, AN Siqi, SHI Wenhua(51)

Scholarly Discussion

Sedimentary Characteristics and Evolutionary Stages in Late Paleozoic of Tian'e Isolated Platform in Northwestern Guangxi	LIU Chao, LU Gang, ZHOU Fusheng, ZHANG Xi, HUANG Xiangli, DU Yuansheng(70)
Interpretation of Rich Organic Matter in Swine Limestone Member of the Permian Chihhsia Formation, Chaobei, Anhui	LU Lu, LI Zhuangfu, KANG Peng, ZHANG Xin(79)
Analysis of Relationship between Seismic Activity and Crust Electrical Textures for the Central Segment of the Tan-Lu Fault Zone	HU Wei, ZHU Guang, YAN Lejia, ZHAN Run(90)
Records of Tectonic Evolution in Maigaiti Slope Southwestern Tarim Basin: Growth Strata and Growth Unconformity	LÜ Ming, TANG Liangjie, YUE Yong(101)
Geochronological, Geochemical Characteristics of Disuga Ore-forming I-type Granitic Porphyries in the Geza Arc, Yunnan Province, and Their Geological Significance	LIU Xuelong, LI Wenchang, ZHANG Na, YIN Guanghou, DENG Mingguo(114)
Geological and Geochemical Features of Carboniferous Volcanic Rocks in Bogda—Harlik Mountains, Xinjiang and Thire Tectonic Significances	ZHAO Tongyang, XU Shiqi, ZHU Zhixin, LIU Xin, CHEN Chuan(124)

Study on Forming Mechanism of Machangqing Alkaline-rich Intrusive Rock in Western Yunnan GUO Xiaodong, LI Jianwen, XIA Rui, CHEN Yongfu, WANG Liang, WANG Zhihua, LU Qing(137)

Research on Large-scale Landslides between Lagan Gorge and Sigou Gorge in the Upper Reaches of Yellow River ZHOU Bao, PENG Jianbing, YIN Yueping, LI Xiaolin, WEI Gang, MA Xiaoqiang(144)

Roles of Meteoric Water on Secondary Porosity of Siliciclastic Reservoirs DING Xiaoqi, HAN Meimei, ZHANG Shaonan, FU Meiyun, WAN Youli(158)

Discussion on Integrated Resource Evaluation and Software Development SHENG Xiujie, JIN Zhijun, GUO Qintao(168)

Research Progress

Geochemical Features of the Late Permian Tuff in Nanchuan District, Chongqing, Southwestern China TIAN Heming, DAI Shifeng, LI Dahua, LIU Dong, ZOU Jianhua, LI Tian(177)

Petrochemical Features, Zircon U-Pb Dating and Hf Isotopic Composition of the Rhyolite in Zhaxikang Deposit, Southern Xizang(Tibet) LIN Bin, TANG Juxing, ZHENG Wenbao, LENG Qiufeng, YANG Chao, TANG Xiaoqian, HANG Yong, WANG Yiyun, TAN Jiangyun(189)

Zircon LA-ICPMS Dating of the Anjishan Pluton in Nanjing—Zhenjiang Area and Its Significance LIU Jianmin, YAN Jun, LI Quanzhong, LIU Xiaoqiang(200)

Late Silurian to Early Devonian Granitoids in the Qimantage Area, East Kunlun Mountains: LA-ICP-MS zircon U-Pb Ages, Geochemical Features and Geological Setting HAO Nana, YUAN Wanming, ZHANG Aikui, CAO Jianhui, CHEN Xiaoning, FENG Yunlei, LI Xi(215)

A Pattern-based Multiple Point Geostatistics Method YIN Yanshu, ZHANG Changmin, LI Shaohua, WANG Jun, SONG Daowan, GONG Weiqing(221)

Helium and Argon Isotopes Tracing for Sources of Ore-forming Fluid in the Ashele Volcanogenic-host Massive Sulfide Copper—Zinc Deposit, Chinese Altay ZHANG Zhixin, YANG Fuquan, LIU Feng, LI Qiang, GENG Xinxia(230)

Groundwater Environmental Geological Problems and Preventive Treatment in Guanzhong Urban Agglomeration TAO Hong, DING Jia(235)

Correspondence · Reference · News Report

Separating out the Liaoyang Group Is the Key for Solving the Geological Problems of Proterozoic Eonothem in Eastern Liaoning JIANG Chunchao(52)

The Establishing Ceremony and Symposiums on the Journals' Further Development of the 39th Editorial Committee of GEOLOGICAL REVIEW and Acta Geologica Sinica(Chinese Edition) Held in Beijing (21)

2012's Impact Factors and Total Cited Frequencies of the Main Chinese Academic Core Periodicals Related to Geology (102)

Abridged Table of the 39th Editorial Committee of GEOLOGICAL REVIEW, Geological Society of China inside back Cover ~ back cover

(Excutive editors of this issue: ZHANG Yuxu, HUANG Min; Figures editor: HUANG Xihui)

地质论评
2014 年 第 60 卷 第 1 期
目次

科技述评

从地壳上地幔构造看洋陆转换作用	杨文采,宋海斌(1)
区域地壳稳定性评价研究进展与问题,兼谈规范编制	姚鑫(22)
释光技术在水成沉积物测年中的应用进展	赵秋月,魏明建,周锐,宋波,潘宝林,陈淑贞,赵晓红(31)
水下碎屑流沉积:深水沉积研究热点与进展	鲜本忠,安思奇,施文华(39)

学术讨论

桂西北天峨孤立碳酸盐岩台地晚古生代沉积特征与演化	刘超,陆刚,张喜,周府生,黄祥林,杜远生(55)
安徽巢北地区栖霞组臭灰岩段富有机质成因探讨	陆鹿,李壮福,康鹏,张新(71)
郑庐断裂带中段地震活动性与深部地壳电性结构关系的探讨	胡惟,朱光,严乐佳,詹润(80)
塔里木盆地西南部麦盖提斜坡构造演化过程的记录——生长地层及生长不整合	吕明,汤良杰,岳勇(91)
云南格咱岛弧地苏嘎成矿岩体 I 型花岗岩年代学、地球化学特征及地质意义	刘学龙,李文昌,张娜,尹光侯,邓明国(103)
新疆博格达—哈尔里克山地区石炭纪火山岩地质地球化学特征及其构造意义	赵同阳,徐仕琪,朱志新,刘鑫,陈川(115)
滇西马厂箐富碱侵入岩体形成机制研究	郭晓东,李建文,夏锐,陈永福,王梁,王志华,鹿青(125)
黄河上游拉干峡—寺沟峡段特大型滑坡及其成因研究	周保,彭建兵,殷跃平,李小林,魏刚,马小强(138)
大气淡水在碎屑岩次生孔隙中的作用	丁晓琪,韩玫梅,张哨楠,伏美燕,万友利(145)
油气资源评价一体化技术及软件实现的探讨	盛秀杰,金之钧,郭勤涛(159)

研究进展

重庆南川晚二叠世凝灰岩的元素地球化学特征	田和明,代世峰,李大华,刘东,邹建华,李甜(169)
藏南扎西康矿区流纹岩的岩石地球化学、锆石 U-Pb 测年和 Hf 同位素组成	林彬,唐菊兴,郑文宝,冷秋锋,杨超,唐晓倩,黄勇,王艺云,谭江云(178)
宁镇地区安基山岩体锆石 LA-ICPMSU-Pb 定年及意义	刘建敏,闫峻,李全忠,刘晓强(190)
东昆仑祁漫塔格晚志留世—早泥盆世花岗岩:年代学、地球化学及形成环境	郝娜娜,袁万明,张爱奎,曹建辉,陈小宁,冯云磊,李希(201)
一种基于沉积模式的多点地质统计学建模方法	尹艳树,张昌民,李少华,王军,宋道万,龚蔚青(216)
新疆阿尔泰阿舍勒 VHMS 型铜锌矿床成矿流体的氮—氩同位素示踪	张志欣,杨富全,刘锋,李强,耿新霞(221)
关中城市群开采地下水有关环境地质问题及其防治对策建议	陶虹,丁佳(231)

通讯资料·消息报道

分出辽阳群是解决辽吉东部元古宇地质问题的关键	姜春潮(52)
《地质论评》、《地质学报》第 39 届编辑委员会成立仪式及进一步办刊问题讨论会在京举行	(21)
中国与地质学有关主要期刊 2012 年度核心影响因子和核心总被引频次	(102)
中国地质学会《地质论评》第 39 届编辑委员会简表	封三~封底

(本期执行总编辑 章雨旭、黄敏 图件修编、排版 黄曦惠)

		姓名	职称	研究方向	单位
编委(共五十三人)	矿床学(八人)	多吉	院士	矿床学、地热地质学	西藏自治区地勘局
		范宏瑞	研究员	成矿流体,流体包裹体	中国科学院地质与地球物理研究所
		丰成友	研究员	矿床地质地球化学	中国地质科学院
		凌洪飞	教授	铀矿地质学,古海洋地球化学	南京大学地球科学与工程学院
		裴先治	教授	造山带地质,区域构造与成矿	长安大学地质调查研究院
		孙晓明	教授	矿床学,海洋地质学	中山大学地球科学系
		王登红	研究员	找矿勘查地质学、成矿规律	中国地质科学院矿产资源研究所
		王瑞江	研究员	矿产勘查,应用构造地质学,矿产资源调查评价	中国地质科学院
	油气地质和煤田地质学(六人)	孙龙德	院士	石油地质,油气开发	中国石油天然气集团公司
		赵文智	院士	油气成藏理论与勘探新领域研究	中国石油天然气股份有限公司勘探与生产分公司
		操应长	教授	沉积学、储层地质学及层序地层学	中国石油大学(华东)地球科学与技术学院
		代世峰	教授	煤岩学、煤地球化学、煤矿物学、煤层气地质	中国矿业大学(北京)煤炭资源国家重点实验室
		贾东	教授	盆地构造与新构造活动	南京大学地球科学与工程学院
		王璞珺	教授	盆地火山岩和油气地质勘查,沉积学和大陆科学钻探	吉林大学地球科学学院

《地质论评》编辑部 Editorial Department of GEOLOGICAL REVIEW

编辑部主任 Chief Editor of the Department 章雨旭 ZHANG Yuxu 郝梓国 HAO Ziguo
编辑部成员 Members of Editorial Department(按姓名汉语拼音字母为序 According to names' alphabet for the order)
郝梓国 HAO Ziguo 黄敏 HUANG Min 章雨旭 ZHANG Yuxu 周健 ZHOU Jian

地 质 论 评 GEOLOGICAL REVIEW
DIZHI LUNPING (Bimonthly, Started in 1936)
(双月刊, 1936 年创刊) Vol. 60 No. 1
第 60 卷 第 1 期 2014 年 1 月 15 日出版 Published on January 15, 2014

主 管	中国科学技术协会	Competent Authorities; China Association for Science and Technology
主 办	中国地质学会	Sponsored by Geological Society of China
编 辑	《地质论评》编辑委员会	Edited by Editorial Committee of GEOLOGICAL REVIEW, 26, Baiwanzhuang Road, Beijing, 100037; Tel.: 010-68999804; Email: georeview@cags.ac.cn; Website: www.geojournals.cn/georev
	地 址:北京阜成门外百万庄路26号	
	邮政编码:100037;电话:010-68999804	
	电子信箱:georeview@cags.ac.cn	
	网 址:www.geojournals.cn/georev	
主 编	杨 文 采	Editor in chief YANG Wencai
出 版	科 学 出 版 社	Published by Science Press, 16, Donghuangchenggen North Street, Beijing, 100717, China
	100717,北京东黄城根北街16号	Composed by Editorial Department of GEOLOGICAL REVIEW
排 版	《地质论评》编辑部	Printed by Beijing QL-Art Printing Co. Ltd.
印刷装订	北京奇良海德印刷有限公司	Distributed by Beijing Bureau for Distribution of Newspapers and Journals
总发行处	北京报刊发行局	Subscription handled by Local Post Offices of China
订购处	全国各邮电局	Distributed abroad by China International Book Trading Corporation(Guoji Shudian)
国外总发行	中国国际图书贸易总公司(中国书店)	P. O. Box 399, Beijing 100044, China
	北京399号信箱, 邮政编码100044	International Periodical No:BM337

刊号:ISSN 0371-5736 国内邮发代号:2-382 国外发行代号:BM337 定价:50.00 元
CN 11-1952/P

国内外公开发行业

ISSN 0371-5736

