# 4th Academic Conference of Geology Resource Management and Sustainable Development 2016

Wuhan City, China 28 December 2016

**Editors:** 

**Henry Zhang** 

**Chang Bo Cheng** 

ISBN: 978-1-5108-3597-9

### Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2016) by the Aussino Academic Publishing House All rights reserved.

Printed by Curran Associates, Inc. (2017)

For permission requests, please contact the Aussino Academic Publishing House at the address below.

Aussino Academic Publishing House 14 Union St Riverwood, NSW 2210

Phone: 61 29 584 8084

aaph\_sydney@hotmail.com

### Additional copies of this publication are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 USA

Phone: 845-758-0400 Fax: 845-758-2633

Email: curran@proceedings.com Web: www.proceedings.com

# **Table of Content**

<u>Title</u>	Page Number
Equational	ī
Foreword	
Keynote Speakers	IV
	mic Transition and Mining Boom strial Engineering and Management
Empirical Analysis of Local Economic Growth and I Qiangjing ZHANG, Zhonghua CHEN	
	1
Research on Incentive Mechanism Innovation for Ge Xiang WEI, Xiaolan LV, Wen WANG, Simeng ZHAN	
	6
The Innovation Trend of Geological Survey Project Wen WANG, Xiaolan LV, Fang TONG, Xiang WEI	Management - Performance Management
Estimation of RMB Settlement Income from The Int Yun YU, Wenlong JIA, Jiabin CHEN	
The Determinants of Energy Consumption in China: <i>Hongtao LIU, Yang YANG</i>	•
Present Status of Chinese Mineral Exploration and S Liang SHAN, Wanyi ZHANG	
	39
Strategic Study on Controlling of Iron Ore Resources Guo YU, Gang WANG	s by Iron and Steel Groups in China 47
Analysis on the Dominant Mineral Resources and M Lu LI, Xin CAO, Rui LI	ining Investment Potential of Afghanistan
The Path Selection of Sustainable Exploitation and U Bing MA, Yang YU, Lu LI	
	63
	g and Environment Policy General Mining Engineering
Evaluation of Geological Environment Carrying Cap Warning System - A Case Study of Ningguo City Zhen YOU, Yalin LEI, Lizhi WANG	
Research n Reducing The Surface Disturbance Cause Cheng MA, Zhicheng LV, Jian LI, Fuliang ZHANG	ed by Mineral Exploration

Yao WANG, Maosheng ZHANG	in Carrying Capacity
Tuo minto, muosileng Zimito	84
The Research on Chinese Mining Corporate Social F Boen LIU	Responsibility
	99
Mineral Resource Utilization and Environment Prote on Ankang, Shaanxi, China Xin LI, Yudong LU, Yahui YANG	ection in the View of Ecological Civilization - Case Study
Application of Oxygen Isotope in Phosphate in Envir Chi ZHANG, Jun YAO, Mingzhe ZHAO	ronmental Science
	11)
The Design of Anti-collusion Mechanism in Rural L Jianying ZHAO, Chunsheng SUN	and Circulation
	115
Evaluation on Green Mining in Economic Regions: © Example Xiaoxia LIN, Jinsheng ZHOU	Chenzhou-Hengyang Non-ferrous Economic Region as an
Problems Analysis and Resolution Proposals on Mar Yanfeng YANG, Junqi XIE	nagement Institutions of Rural Residential Land in Beijing
•	
	neral Mining Engineering Exploration and Prospecting Processes and Equipment Matching Technologies
2 2 2	
Characteristics of Cretaceous Prototypic Basin and L Eastern China Zhu WEN, Lingyu LIU, Renchen XIN, Yang LIU	cithofacies Paleogeography in Continental Margin of
Cretaceous Red Bed and Danxia Landform in Shand Yuanxin PENG	-
Applied Schwarz-Christoffel Mapping to Analysis C Mei YUAN, Dengyuan MO, Huiqing PENG, Di WU	•
Layout of Shaft Based on the Coupled Analysis of S Jinan WANG, Yong ZHOU	tress Field158
Value Realization of Mineral Resources and Evaluat Huanpei LI, Rongge XIAO, Fan JUN	ion of Mining Rights

Lin FENG, Yuanfu ZHANG, Chenlin HU	
	179
The Experimental Study on the Deposition Law of T Shumei SUI, Long HAI	-
Diabase Geochemical Characteristics and Indication Southern China Jinjun YI, Nan WANG	n Significance of Makeng Deposit in Fujian Province,
Economic Reflections on Compensable Use of Natu "Common but Differentiated" Compensable Use Sy Qing ZHU, Lianjun WANG	
Application of High Precision Magnetic Measurement Hao ZHANG, Jin YANG	
Researches on The Influence of Mined-Out Area on Ping YANG, Shoubao XUE, Li SONG, Yueyuan LIU	
Classification Code	Engineering Geology 2: 480 Engineering Geology 221 221
Geological Relics Assessment on E'man Volcanic C	
Xiaohui HAN, Xuemu WANG	
	225
Evaluation of Landscape Resources and Sustainable in Qinghai Province Jinlin CHEN, Jianping ZHANG	Development Strategies of The Cambra National Geopark
,,,	233
Characteristics and Resource Assessment of Karst Lan Yongxiang CHI, Zhiqiang KANG, Liwei LIN	dscape of Yuhua Cave In Jiangle, Fujian Province, China
Scientific Research and Science Popularization Valu Geopark, Inner Mongolia, China	ue of Geoheritage in Alxa Desert UNESCO Global
Longlong ZHAO, Mingzhong TIAN, Ming BAO	
The Geological Relics Resources Influence Factors Study from Chengde Danxia Landform National Ge Sha ZHEN, Weiming GAO	in Evaluating the Danxia Landform of North China- Case opark, Hebei Province
Shu Ziten, wenning GAO	254

Yanjie WANG, Fadong WU	g UNESCO Global Geopalk
The Basic Characteristics and Problems of Delamina Yanyun NAN, Xiaoguang YANG	ation
Geology, Geochemistry and Chronology of The Mat Absai Vatuva, Da ZHANG, Min LIU	
Wei XUE, Da ZHANG, Jinbo PAN	otential of Early Cretaceous Emerald Deposit at Saxi, China
Investigation and Study of Geoheritages of Tengchong <i>Juan LIU, Zhifang ZHAO, Fadong WU</i>	Volcano National Geological Park Based on Remote Sensing
The Classification and Assessment of Geological He	eritage Resources in Mount Yimengshan Geopark, China
Yuanfang YAN, Fadong WU	
Geochemical Transect Across Xingmeng Orogenic I Univariate and Multivariate Perspective Kun TANG, Qinghua CHI, Xueqiu WANG, Xin LIN	Belt-North China Craton: Preliminary Results Based on
inan iii (6, gagaaa ciii, iiacqaa //ii (6, iia bii (	
Classification Code: 481.1.1 Geo	caphic Information System omorghlogy; 902 Engineering Graphics ulti-Sensor Information Fusion and RBF Neural Network
The Research Progress of Temporal GIS and its App Ying XU, Shoujun YING	· ·
Inversion of The Organic Matter Space Structure based Haochuan LEI, Xiaobin REN, Diange CONG	on Landsat 8 Images in Datong County of Qinghai Province
Research on Image Interpretation with DEM Techni Liyuan WANG, Jie CHENG, Diange CONG, Wanli	
Desertification Features in Dengkou County from 19 Xiu Ming LI, Fadong WU	
A Research on the Format Conversion of the Databa Management Based on SuperMap Haiyan DAI, Xiaohong TANG	se System of County Mineral Resource Planning and
,,	326

## Chapter Six: Coal Mines and Mining Classification Code: 503 Coal Mines and Mining

Peng ZHU, Chao ZHANG, Yuanbao ZHANG, Shich	ol Point Theory in Coal Mine Occupational Hazards Control <i>uan TANG</i>
Monitoring the Roof Abscission Layer Base on Arm Quanzhu ZHANG, Wenshan ZHANG, Yonghong DE	
Coupling Support Model of Narrow Coal Pillar Gob Tong ZHANG, Xiaodong NIE	
Application of Integrated Geophysical Prospecting T Lei ZHANG, Lilei ZHANG, Junzhi WANG	Fechnology in Coal Mine Empty Area
Spatio-temporal Analysis of Ecological Carrying Ca Ling LIU, Jinsheng ZHOU	pacity in Coal Mining Cities based on RS and GIS
A Brief Analysis of the Present Situation of China's Sm Xiangna LI, Huiting ZHANG	nall and Medium-sized Coal Mine Engineering Management
Stability Analysis on Urumqi Beltway (East Route) Zhipei ZHANG, Keyang HU, Jianjun REN	
	m Gas and Renewable Energy e: 525.1 Enery Resources
Studies on the Prevention Technique of Coal Seam S Yu HAO, Longjun XU, Zhenghu WANG, Wei LU	Spontaneous Combustion in Hami Open-Pit Mine
in inite, zeng, mine, zweng, m mine, menze	
Relationship of Supporting Force and The Support S Mechanized Top Coal Caving Pengzhao REN, Jinan WANG	Stability in Steeply Inclined Coal Seam Extracted by Fully
The Role of China in the International Trade of Phot	
Fengbin XIE	
	al Gas Hydrate in the Muli Coalfield of Qilian Mountain
Chulin XIA, Runmin PENG, Diange CONG, Wen ZI	HANG, Erfeng REN395
Preliminary Study of Hydrogeochemical Characteris	
Changhong FU, Lizhi WANG	nics of Tanquig Ocomernial Pleid, Deijing City
-	

Comprehensive Analysis Based on VAR Model and Gray Relational Analysis  Zhanju CUI, Lu FANG	
Mingtao GUO, Xuefeng SU	
Chapter Eight: Metal Mines and Mining Classification Code: 504 Metal mines and Mining	
Benefits Analysis of Mineral Resources Appraisal Projects Taking "Appraisal of Copper Polymetallic Ore in Zhongdian Area of Yunnan Province" as an Example Xiaolan LV, Xiaomin CAO, Lu WANG	
Clastic Rock Controlling Characteristics of The Sandstone Type Lead - Zinc Deposit from Uragen Area, Xinjiang Province	
Xingjian LI, Da ZHANG, Zhihui ZHANG, Chaoyang QUE, Xuexu LI, Xiaowei MI	
Temporal and Spatial Distribution and Prospecting Direction of Vanadium-titano-magnetite Deposit in China <i>Tianguo WANG, Jishun LIU</i>	
Analysis of China's Uranium Resources Security Issues  Manli WANG, Wanli XING	
The Characteristics of Ore-Controlling Structure in Baoshan Cu-Pb-Zn Polymetallic Deposit, Hunan Province Xuan WU, Fanyu QI	
Geological Characteristics and Genesis of The Giant Zhuxi Tungsten Deposit, Northeast of Jiangxi Province Ning LI, Yongjun DI, Da ZHANG, Xiaolong HE, Guohua CHEN	
Geological Characteristics and Genesis of The Dashui Vanadium Deposit in The Beishan Area, Xinjiang Province Ye WANG, Chao LIU	
Study on Elements Distribution Characteristics and Comprehensive Utilization of Tailings in Hongqiling Nickel Mine, Jilin Province  Hanjiang PAN, Zhizhong CHENG, Lu LI	
11 Indigitals 17111, 2112110118 CTIENO, Eu El	
Geological Characteristics and Genesis of The Lengshuikeng Ag-Pb-Zn Deposit, Jiangxi Province <i>Yaoyao ZHANG, Da ZHANG</i>	
Geochronology, Geochemistry and Hf Isotopes of High Mg Adakitic Intrusion along The Tan-Lu Fault: Petrogenesis and Geodynamic Implications <i>Liqiong JIA</i>	
470	

Discussion on Metallogenic Material Sources of Mis Guizhou Area Feng YUAN	ssissippi Valley-Type Pb-Zn Deposits in Sichuan-Yunnan-
	476
Present Situation and Future Development Trend of Chao LIU, Ting ZHAO	Thallium Ore Resources
Source and Distribution Rule of Mercury in Natural Qituan YAN, Zhongxi HAN, Shuying WANG	Gas Reservoirs, China
Metalogenic Regularity and Prosecting of Dalaimiae Yanyun NAN, Xiaoguang YANG, Tao WANG	o Cu-Mo Polymetallic Deposit in Inner Mongolia
	Nine: Iron Ore Heavy Metal Mining; 545.1 Iron
Research on Exploitation and Application of a New Fil Peixin DONG, Zhiqiang YANG, Qian GAO	ling Cementing Material for Whole Tailings of Iron Mine
Research on Iron Element's Quantitative Extracting Zhichun WU, Linqing LIU, Fusheng GUO	
Underground Curtain Grouting near Orebody Techn Applications: An Example from Xulou Iron Mine in Jian CHEN, Yongbo TENG, Junxue MA	
Yaoyao ZHANG, Da ZHANG, Jun LIU, Xingjian LI,	m Ore-Controlling Role in The Ailaoshan Metallogenic Belt $Xingchen\ BU$
Mining Area	Mineral Resources and Empirical Study on Typical Iron
Xuefeng WANG	
The Fe Isotope Fractionation during Arsenic Remov Kunming WU, Lizhi WANG, Haiyang WANG	
Kumung # 0, Elzii #Aiv0, Hutyung #Aiv0	
Chapter Ten: (Classification Code: 504.4 Heavy Metal Mining;	Gold and Rare Earth 547.1 Precious Metals; 547.2 Rare Earth Metals
Genesis of The Magmatic Rocks in Cishan Gold De Mingxuan LI, Yangsong DU, Qian DONG, Wei TU,	
Distribution of Trace and Rare Earth Elements in Cr Yan ZHAO, Chiyang LIU, Xiaochen ZHAO,	rude Oils from The Ordos Basin, NW China
· -	5.10

Distribution of China Gold Resources and Sustainable Development Chaowen HUANG, Shugen ZHANG, Biao LIU	556
Types, Characteristics and Genesis of Mesozoic Gold Deposits in the Jiaodong Peninsula	330
Fang XU, Junjie GAO, Rongwen HAN	561
REE Characteristic and Significance of DongChuan Red Clay Resource in Kunming, China Yingwei DI, Diange CONG, Yunfei FENG	567
Chapter Eleven: Nonmetallic Mines and Mining Classification Code: 505 Nonmetallic Mines and Mining	
Research on Graphite Resources' Development and Utilization in China Yilun DU, Xiaoli LEI, Fuliang ZHANG	
	571
Evaluation of Fluorite Resources and Suggestions for Industrial Development <i>Huihui CAI</i>	
	575
Researches on Slump Test for Fine Particle Paste Slurry  Zhishuang LIU, Yongwang WANG	
	580
The Industrial Path to Comprehensive Utilizing Solid Waste of Phosphorus Industry in Hubei Province Yongqing WANG, Laifeng WANG	586
The Research on Frost-resistance of Recycled Concrete Mixed Sulfate Early Strength Agent	500
Zhigang ZHU, Yanping TU, Wenjun YU	593
Determination of Organophosphorus Flame Retardants and Plasticizers in Biological Samples by Gas Chromatography Tandem Mass Spectrometry Ying ZHANG, Lifei WEI, Wei LIU	
	597
Chapter Twelve: Petroleum Deposits and Engineering Classification Code: 510 Petroleum Engineering; 512 Petroleum and Related Deposits	
The Design of Oil Pipeline Laying Qiming FENG	
	603
Performance of Vertical Fractured Wells with Finite Conductivity in Channel -Type Reservoirs with Low Permeability	
Fengqiang XU, Jiahang WANG, Wenxiu DONG, Xiaodong WANG	609
Analysis on The Cooperation of Oil and Gas Upstream Projects Between Russia and Asian Countries Yina SU, Xuemei LI	
1ma 50, Nacinci 11	615
Research on Law of Gas Dynamic Disasters and Geological Structure in Majiagou Mine Liming QI, Xukun ZHANG, Rong ZHAO	620

Qing XIE, Kuan JIANG, Xingke YANG, Yuzhu DING		
2	6	524
Mine Geological Environment Protection and Recov Kaizhu QIAN, Jingjing LV, Miwen GUO		
	6	529
CO2 and Rn Geochemical Characteristics of Fault G Jiang WANG, Lisen WANG	as in Kouquan, Shanxi Province	534
		-21
Radial Point Collocation Method (RPCM) for Solvin Tian JIAO, Zhonghua TANG	ng Phreatic Flow over an Inclined Impermeable Bed	541
Fine Structure Interpretation on Putaohua Oil Reserv Sijia CAO, Yejun JIN	voir in the Fang 135 Block, Song Fangtun Oilfield	
	6	548
Regional Assessment of Effect of Gas Hydrate Dissochunjuan WANG, Dewen DU		
	6	,54
Petrology, Petrochemical Characteristics and Geolog Eastern Tianshan Area, Xinjiang Ye WANG, Chao LIU, Yuanyuan XU	gical Significance of Beitashan Group Volcanics from	
· · · · · · · · · · · · · · · · · · ·	6	6
	een: Soil Mechanics 183.1 Soils & Soil Mechanics	
Landslide Prediction Based on RBF Neural Network		
Limin LI, Zongzhou WEN, Lu LI		
	6	)03
The Function of Law and Morality in Appraisal of R Yanwen XU, Qiwu ZHANG	eal Estate	
	6	57(
Influence of Soil Type on The Sorption of Cd(II) ont Xiuqing GAO, Junfeng LIU		
	6	)75
Investigating The Precision of Discontinuous Deform Rock Masses Wenjun GONG, Yunsheng WANG, Yonghong LUO	nation Analysis (DDA) to Deal with Tensile Failure of	
wengun Gorid, Tunsneng Willia, Tonghong Loo	6	583
Qinghai	Containing Nano-particles in Chlorine Saline Soil Area of	of
Zhengwei CHEN, Yang GAO	6	589
Analytical Fast Pyrolysis of Cellulose and Hemicellu		
Chong ZHANG, Zhibo ZHANG, Minshu CUI, Qiang		

Stability Analysis of Rock Slope Based on DDA Methor Zhengqi LEI, Guoxin ZHANG	od
Evaluation of Chitosan Coated Nanoscale Zero-Valent Junfeng LIU, Xiaoran ZHANG	Iron for Remediation of Cadmium Contaminated Soil
Research on the Application of 3S Technology in Soil Haijun WANG, Junhuan PENG	
<u>*</u>	urces and Hydraulic Engineering s; 440 Water and Waterwords Engineering
A Reservoir Operation Research for Economic Benefit Yisong XIONG, Xu WANG, Xiaohui LEI, Jianshi ZHAO	
Statistical Analysis of Total Dissolved Solids in Groun Yifeng LUAN, Yudong LU $\dots$	dwater in Yaoba Oasis, China
Numerical Simulation of Low Permeability Reservoir G Huan WANG, Bing WANG	Considering Threshold Pressure Gradient
Calculation of Ecological Base Flow Based on Improve Yuheng YANG, Shengle CAO, Yang LIU	ed Tennant Method740
The Research of the Water Supply Cost in Large-scale Shengle CAO, Yufei CHENG, Xiuling SUN, Cuisong Your CHENG, Canada Canada Cheng Chen	
Experiment Studies on Membrane Behavior of the Clay Mintian XU, Liting XING, Hua XIANG	y in Inland Shallow Salt Water Leakage Process
Optimization of Dye Intermediate Wastewater Treatme Ying GUO, Honghan CHEN, Hui WANG	ent by Fenton Process
Critical Area Identification of Non-point Source Pollut Yang LIU, Shengle CAO, Yuheng YANG	
Analysis of Threshold Value and Development Degree Miao ZHANG, Yanbing YUAN, Xiaohui YUAN, Yulu W	of River System in Qingjiang River Basin
Parameter Identification in Groundwater Flow Modelin Jing YANG, Zhonghua TANG	
Research on Climate Change with Grain Size Analysis and Liyuan WANG, Jie CHENG, Diange CONG	

An Overview of Recent Developments in Parallel Solution for Partial Differential Equation of Groundwater Simulation  Linxian HUANG, Liting XING, Zhenghe XU	
	93
Solidification/Stabilization Treatment for Heavy Metals Polluted Sediments from Urban River <i>Qin LIU, Jinjun YI</i>	
	99
Chapter Fifteen: Mine Safety and Disaster Mitigation Classification Code: 914 Safety Engineering	
Risk Evaluation of Chagutan Debris Flow in Minxian, Gansu Province Peng LI, Xi WANG, Peng DU	
	05
The Methods of Prevention for Coal Spontaneous Combustion by Microbial Technology Erxin GAO; Cancan ZHI; Mengjie DING	
	13
The Well-water-level Observation Network for Earthquake Precursory in Mainland China  Chunyan FAN, Yuanyuan GAO, Dali JIN	10
Technology and Application of Mining Gas Disaster Prevention in Mine by Roof High Location Directional Drilling  Jun FANG, Quanxin LI	
	23
Study on Rainfall Thresholds for Triggering Major Geological Disasters in Guangxi Province of China Lijie ZHANG	21
	31
Data Application of China Earthquake Monitoring Networks in Landslide Field  Chunguo LIU, Xiaoli CHEN, Junyi FAN, Zhigang TAO	36
Chapter Sixteen: Geopark Classification Code: 454 Environmental Engineering	
Danxia Landform Landscape and Tourism Image Promotion of Mount Maling in Tancheng City, Shandong Province	
Gang LI, Yuanfang WU, Quanke ZHAO	43
Evaluation of Low-carbon Tourism in Xingwen World Geo-Park Based on DPSIR Model Sisi LIU, Yali WEI	
	49
Estimation of Tourism Industry Carbon Emissions and Its Decoupling Effect on Economic Growth in Xianning Cit Min ZHANG, Juncheng ZHU, Guosong HE	-
	54
A Comprehensive Evaluation of Geoheritages in Dunhuang Yardang National Geopark, Gansu $Hao\ CHU,\ Fadong\ WU$	60
	60
Quantitative Evaluation of Geological Heritages in Qinghai Lake National Geopark Lilei ZHANG, Fadong WU	60

Geoscience Popularization and Tourism Development Strategy of Jingyu Volcanic Mineral Spring National	al
Geopark in Jilin Province	
Hongyan LIU, Fuheng YAN, Limin YANG	
	. 875
Author and Affiliation Index	V
About Publisher	XI

<u>END</u>