

# 《海洋科学进展》第 38 卷(2020 年)

## 总 目 次

### 第 1 期

- 海水入侵—土壤盐渍化灾害链研究初探 ..... 徐兴永, 付腾飞, 熊贵耀, 苏 乔, 刘文全, 陈广泉(1)  
生物硅组成及对硅循环影响的研究进展 ..... 臧家业, 王 昊, 刘 军, 于志刚, 吴 念, 冉祥滨(11)  
青岛外海潮致第二模内孤立波的观测研究 ..... 杨光兵, 郭延良, 于 龙, 陈 亮(21)  
考虑摩擦的绕岛理论及在印尼贯穿流流量估算中的应用 ..... 杨延召, 王立伟, 徐腾飞, 魏泽勋(28)  
4 种表层风场资料在北半球海域的适用性评估 ..... 刘解明, 熊学军, 宫庆龙, 于 龙, 郭延良(38)  
孟加拉湾夏季季节内振荡的湿静力能分析 ..... 李奎平, 王海员, 杨 洋, 于卫东, 李俐俐(51)  
中国东部海域冬季风场与海浪场的关联特征分析 ..... 周媛媛, 周 林, 关 皓, 杨 波(60)  
能量色散 X 射线荧光光谱法测定海洋碎屑沉积物中 28 种元素 .....  
..... 汪虹敏, 张 颖, 徐 磊, 林学辉, 高晶晶, 朱爱美, 王 赛, 刘季花(70)  
南极菌 *Pseudoalteromonas* sp. A211-5 产  $\alpha$ -淀粉酶 Amy3809 的表达、性质及其降解特性 .....  
..... 谷晓倩, 李 江, 潘爱红, 林学政(81)  
广西防城江口沉积物中重金属环境背景构建 ..... 王 晶, 张志卫, 闫文文, 谷东起, 于晓晓, 寻晨曦(91)  
不同悬沙组分对潮流的响应关系研究 ..... 朱子晨, 胡泽建, 刘建强, 张莞君, 张永强, 黄炳智(103)  
基于 Pauli 分解散射参数特性的潮沟信息提取 ..... 朱言江, 韩 震, 和思海(113)  
厦门岛海岸线分形特性演变规律的研究 ..... 林 松, 俞晓华, 庄小冰, 李焱龙, 张 宇, 赵志庆(121)  
有限尺度李雅普诺夫指数与海表温度梯度相关性的初步分析 .....  
..... 曹 蕾, 张 杰, 杨俊钢, 周超杰, 孙伟富, 崔 伟(130)  
基于遥感和 GIS 的烟台芝罘湾海岸线变迁研究 ..... 孙贵芹, 徐艳东, 林 蕾, 朱金龙, 赵景丽, 魏 濡(140)  
走航 ADCP 观测资料质量控制方法及应用 ..... 唐华亮, 聂红涛, 肖劲根(153)  
西沙永乐环礁三维 DEM 构建及地形地貌精细刻画 ..... 安永宁, 王仁义, 布如源, 占少元, 秦志亮(162)  
粤东南澳岛青澳海滩侵蚀退化风险评价及其安全调控 ..... 李 平, 杜 军, 张志卫, 徐国强(171)  
北海狮水下声信号类型分析 ..... 姜 莹, 吕连港, 刘宗伟, 黄龙飞, 杨志国, 杨春梅(182)

### 第 2 期

- 环境变化对造礁石珊瑚营养方式的影响及其适应性 ..... 黄 晖, 俞晓磊, 雷新明, 张 芳, 练健生(189)

- 孟加拉湾季风对热带气旋生成和发展的调制机制研究 ..... 李志, 孟强, 薛亮(199)  
 南海东北部 C 型内孤立波的观测与分析 ..... 徐智优, 原庆东, 熊学军, 陈亮, 郑全安(211)  
 印度洋波浪诱导的水体输运效应及其对赤道 SST 异常的影响 ..... 夏浩峰, 吴克俭, 李瑞, 邢硕(226)  
 巽他海峡的水交换过程研究 ..... 王建, 李淑江, 徐腾飞, 汪一航, 徐晓庆, 王永刚, 魏泽勋(238)  
 渤海—北黄海沉积物黏土矿物特征及其环境意义 .....  
     乔淑卿, 石学法, 方习生, 胡利民, 于永贵, 刘焱光, 李传顺, 姚政权(253)  
 中国黄、渤海海水中溶解镉的形态研究 ..... 任艺君, 李力, 王小静, 甄晓桐, 刘季花(263)  
 胶州湾营养盐的长期变化及其生态效应 .....  
     徐蕊悦, 王保栋, 辛明, 孙霞, 王宗兴, 陈衍, 谢琳萍, 林春野(276)  
 中国海底栖多毛类分类多样性 ..... 葛美玲, 李璇, 张学雷, 范士亮, 徐勤增(287)  
 南海三沙永乐龙洞及邻近海域浮游植物群落结构 ..... 傅明珠, 孙萍, 李艳, 蒲新明, 袁超, 张学雷(304)  
 长江口潮差中长期变化对河口生态环境的影响 ..... 张赛赛, 杨世伦, 李鹏, 陈沈良, 李占海, 石学法(317)  
 东印度洋海域最优深度基准面模型构建 ..... 姜传苓, 付延光, 周兴华, 陈义兰, 王永康(326)  
 莱州湾南部沿海地区环境地质现状及成因研究 ..... 王建, 张军强, 任寒寒, 李亚蒙, 郭颖(336)  
 Dean 模型在山东半岛西北岸滩动力地貌研究的应用 ..... 刘成, 胡日军, 朱龙海, 林纪江, 张卓(348)  
 海洋温差发电系统中板式换热器换热特性研究 ..... 彭景平, 陈凤云, 吴浩宇, 葛云征, 刘蕾, 刘伟民(359)  
 一阶速度-应力双相介质方程逆时偏移及 GPU 加速实现 .....  
     张晓波, 刘保华, 于凯本, 刘苗, 杨志国, 于盛齐, 宗乐(366)

### 第 3 期

- 晚中新世以来印度洋-太平洋暖池水体交换过程及其气候效应 ..... 李铁刚, 熊志方, 贾奇(377)  
 EN4 两套分析数据中海洋热含量的差异 ..... 张敏, 赵昌, 张远凌, 姜文正, 王刚(390)  
 东海黑潮 PN 和 TK 断面流量的多时间尺度变化特征 ..... 许达, 马超, 鞠霞(400)  
 基于 DISTMESH 的三角形网格自适应生成方法与应用 ..... 张靖婷, 王宪业, 李铖, 葛建忠(412)  
 基于 CryoSat-2 数据的 2014—2018 年北极海冰厚度分析 ..... 张婷, 张杰, 张晰(425)  
 东海外大陆架厚层砂质沉积岩石磁学特征 ..... 刘建兴, 石学法, 吴永华, 于晓晓, 单新, 徐涛玉(435)  
 质子旋进式海洋地磁日变站的设计与实现 ..... 李先锋, 郑彦鹏, 华清峰, 刘凯, 马龙, 张林清(446)  
 浅地层剖面仪噪声特征分析及采集参数优选 .....  
     张彬彬, 赵国兴, 吴永亭, 张道建, 张海泉, 孙杨, 刘凯(455)  
 雅浦海沟海参(Synallactidae)肠道微生物多样性及系统进化分析 .....  
     高志远, 杨继超, 刘文凤, 何培青, 陈颖(463)  
 春季南黄海、东海浮游植物群落结构与环境因子 ..... 郭术津, 姚庆祯, 魏传杰, 孙晓霞(476)  
 基于灰度预测的变长度经验模态分解方法研究 .....  
     张晓波, 刘保华, 于凯本, 刘苗, 杨志国, 于盛齐, 宗乐(493)

- 光谱信息与纹理特征结合的 GF-1 海上溢油检测研究 ..... 包萌, 张杰, 张晰, 孟俊敏(504)  
一种高效海洋温差能发电循环的性能分析 ..... 吴浩宇, 彭景平, 葛云征, 刘蕾, 陈凤云, 刘伟民(513)  
海岸植物带对孤立波的波能耗散研究 ..... 龚尚鹏, 陈杰, 蒋昌波, 何飞, 李佳徽(522)  
GNSS 海洋浮标海面高程动态不确定度研究 ..... 梁冠辉, 陶常飞, 周兴华, 刘同木, 林冠英, 黄桦(532)  
海洋物性监测小型浮标稳定性设计 ..... 梁冠辉, 薛宇欢, 孙宝楠, 陶常飞, 官晟, 周兴华(541)

#### 第 4 期

- 干涉雷达高度计定标检验进展 ..... 周兴华, 杨磊, 徐永生, 朱琳(549)  
北印度洋半日潮波的数值模拟研究 ..... 万荣强, 魏泽勋, 高秀敏, 徐晓庆, 滕飞(562)  
印尼贯穿流出流海域海表高度时空变化 ..... 金娇燕, 王永刚, 朱耀华, 徐腾飞, 李淑江(574)  
北太平洋环流振荡形成机理的数值研究 ..... 吕庆平, 张瑰, 张东凌, 张胜军(582)  
中低风速下海洋飞沫对海气热通量的影响 ..... 刘展池, 焦志勇, 姜文正, 乔方利, 戴德君, 陈胜(591)  
2016 年苏北近海风场和波浪场多时间尺度变化的数值模拟研究 .....  
..... 徐瑾, 曹玉晗, 杨永增, 董昌明, 王锦, 朱伟军(600)  
长江口邻近海域海表温度变化特征分析 ..... 王洁, 王杰, 许佳峰, 栾奎峰, 杨奕杰, 吕阳阳(624)  
基于小波变换的海洋地磁日变改正研究 .....  
..... 张连伟, 郑彦鹏, 梁瑞才, 马龙, 李先锋, 刘洋廷, 华清峰, 夏成龙(635)  
中国南海表层叶绿素  $a$  季节内变化特征及成因 ..... 连展, 王新怡, 魏泽勋(649)  
雅浦海沟南部超深渊沉积物成分与形貌 ..... 尼鑫, 孙承君, 金红, 杨桂朋, 丁海兵(662)  
渤海岸线及水深变化对水动力影响的数值模拟 ..... 董娇娇, 孙健, 陈燕珍, 刘长根, 马慧敏, 刘春宏(676)  
潮流及单向流作用下海底沙波形成和运移试验 ..... 王琮, 孙永福, 刘振纹, 周其坤, 孙玉欣(688)  
基于 IDW 的埕岛海域水下三角洲地形演变 ..... 蒋伟达, 孙永福, 刘绍文, 董立峰, 宋玉鹏(697)  
应用重力地质法反演马里亚纳海沟地形 ..... 王永康, 周兴华, 唐秋华, 王盼龙, 姜传苓, 刘豪, 张孝首(708)  
基于 Kongsberg EM 多波束的 Snippet 数据处理方法 ..... 胡俊, 吴永亭, 豆虎林, 李治远(717)

# ADVANCES IN MARINE SCIENCE

Vol. 38, 2020

## CONTENTS IN BRIEF

### No. 1

Progress and Prospect of the Research on Seawater Intrusion to Soil Salinization Disaster Chain .....	XU Xing-yong, FU Teng-fei, XIONG Gui-yao, SU Qiao, LIU Wen-quan, CHEN Guang-quan(1)
The Research Progress in Biogenic Silica Composition and Its Impact on Silica Cycle .....	ZANG Jia-ye, WANG Hao, LIU Jun, YU Zhi-gang, WU Nian, RAN Xiang-bin(11)
Observation of Mode-2 Internal Solitary Waves Generated by Tides in Qingdao Coastal Waters .....	YANG Guang-bing, GUO Yan-liang, YU Long, CHEN Liang(21)
The Island Rule With Consideration of Frictions and Its Application on the Transport Estimation of the Indonesian Throughflow .....	YANG Yan-zhao, WANG Li-wei, XU Teng-fei, WEI Ze-xun(28)
Applicability Evaluation of Four Surface Wind Products in the Northern Hemisphere Sea Area .....	LIU Xie-ming, XIONG Xue-jun, GONG Qing-long, YU Long, GUO Yan-liang(38)
Budget Analysis of Moist Static Energy in Summertime Intra-seasonal Oscillations Over the Bay of Bengal .....	LI Kui-ping, WANG Hai-yuan, YANG Yang, YU Wei-dong, LI Li-li(51)
Analysis of the Correlation Between the Daily Wind Field and Wave Field in Winter in the East China Sea .....	ZHOU Yuan-yuan, ZHOU Lin, GUAN Hao, YANG Bo(60)
Determination of Twenty-eight Elements in Marine Clastic Sediment Samples by Energy Dispersive X-ray Fluorescence Spectrometry .....	WANG Hong-min, ZHANG Ying, XU Lei, LIN Xue-hui, GAO Jing-jing, ZHU Ai-me, WANG Sai, LIU Ji-hua(70)
Expression and Characterization of $\alpha$ -amylase Amy3809 From Antarctic Bacterium <i>Pseudoalteromonas</i> sp. A211-5 .....	GU Xiao-qian, LI Jiang, PAN Ai-hong, LIN Xue-zheng(81)
Background Levels of Heavy Metals in Marine Sediments at the Coast of Fangchengjiang River Estuary in Guangxi Province .....	WANG Jing, ZHANG Zhi-wei, YAN Wen-wen, GU Dong-qi, YU Xiao-xiao, XUN Chen-xi(91)
Study on the Response of Suspended Sediment With Different Compositions to Tidal Current .....	ZHU Zi-chen, HU Ze-jian, LIU Jian-qiang, ZHANG Wan-jun, ZHANG Yong-qiang, HUANG Bing-zhi(103)
Information Extraction of Tidal Channels Based on the Scattering Parameter of Pauli Decomposition .....	ZHU Yan-jiang, HAN Zhen, HE Si-hai(113)
Fractal Characteristics Evolution of Coastline of the Xiamen Island .....	LIN Song, YU Xiao-jian, ZHUANG Xiao-bing, LI Yan-long, ZHANG Yu, ZHAO Zhi-qing(121)

Preliminary Analysis of the Correlation Between Finite Size Lyapunov Exponent and Sea Surface Temperature Gradient .....	CAO Lei , ZHANG Jie , YANG Jun-gang , ZHOU Chao-jie , SUN Wei-fu , CUI Wei(130)
Coastline Changes in the Zhifu Bay of Yantai City Based on Remote Sensing and GIS .....	SUN Gui-qin , XU Yan-dong , LIN Lei , ZHU Jin-long , ZHAO Jing-li , WEI Xiao(140)
A Quality Control Procedure for Shipboard ADCP Data and Its Application .....	TANG Hua-liang , NIE Hong-tao , XIAO Jin-gen(153)
3D-DEM Construction and Refined Topography and Geomorphology of Yongle Atoll, Xisha .....	AN Yong-ning , WANG Ren-yi , BU Ru-yuan , ZHAN Shao-yuan , QIN Zhi-liang(162)
Erosion Risk Assessment and Safety Regulatory of Qing'ao Beach in the Nan'ao Island, Guangdong Province .....	LI Ping , DU Jun , ZHANG Zhi-wei , XU Guo-qiang(171)
Classification of Underwater Vocalizations Produced by the Captive Steller Sea Lions ( <i>Eumetopias jubatus</i> ) .....	JIANG Ying , LÜ Lian-gang , LIU Zong-wei , HUANG Long-fei , YANG Zhi-guo , YANG Chun-mei(182)

## No. 2

Research Progress in the Effects of Environmental Changes on the Nutritional Patterns and Adaptability of the Scleractinian Corals .....	HUANG Hui , YU Xiao-lei , LEI Xin-ming , ZHANG Fang , LIAN Jian-sheng(189)
Modulation of Tropical Cyclone Activity by the Monsoon Over the Bay of Bengal .....	LI Zhi , MENG Qiang , XUE Liang(199)
Observation and Analysis of Type-C Internal Solitary Waves in the Northeastern South China Sea .....	XU Zhi-you , YUAN Qing-dong , XIONG Xue-jun , CHEN Liang , ZHENG Quan-an(211)
The Wave-induced Transport in the Indian Ocean and Its Influence on Tropical SST Anomaly .....	XIA Hao-feng , WU Ke-jian , LI Rui , XING Shuo(226)
Study on the Water Exchange in the Sunda Strait .....	WANG Jian , LI Shu-jiang , XU Teng-fei , WANG Yi-hang , XU Xiao-qing , WANG Yong-gang , WEI Ze-xun(238)
Distribution and Composition of Clay Minerals in Seafloor Surface Sediments of the Bohai Sea and North Yellow Sea and Their Implications for Sedimentary Environment .....	QIAO Shu-qing , SHI Xue-fa , FANG Xi-sheng , HU Li-min , YU Yong-gui , LIU Yan-guang , LI Chuan-shun , YAO Zheng-quan(253)
Cd Speciation of Seawater in the Yellow Sea and the Bohai Sea .....	REN Yi-jun , LI Li , WANG Xiao-jing , ZHEN Xiao-tong , LIU Ji-hua(263)
Long-Term Changes of Nutrients and Their Ecological Effects in the Jiaozhou Bay .....	XU Han-yue , WANG Bao-dong , XIN Ming , SUN Xia , WANG Zong-xing , CHEN Kan , XIE Lin-ping , LIN Chun-ye(276)

Taxonomic Diversity of the Benthic Polychaetes in China Seas .....	GE Mei-ling , LI Yi-xuan , ZHANG Xue-lei , FAN Shi-liang , XU Qin-zeng(287)
Phytoplankton Community Structure in Sansha Yongle Blue Hole and Its Adjacent Area of the South China Sea ... FU Ming-zhu , SUN Ping , LI Yan , PU Xin-ming , YUAN Chao , ZHANG Xue-lei(304)	
Medium- and Long-term Changes in Tidal Range in the Yangtze River Estuary and Their Potential Impacts on Ecological Environment .....	ZHANG Sai-sai , YANG Shi-lun , LI Peng , CHEN Shen-liang , LI Zhan-hai , SHI Xue-fa(317)
Construction of Optimal Depth Datum Model in the Eastern Indian Ocean Using Tide Gauge Data .....	JIANG Chuan-ling , FU Yan-guang , ZHOU Xing-hua , CHEN Yi-lan , WANG Yong-kang(326)
Current Situation and Genesis of Environmental Geology in the Coastal Region of Southern Laizhou Bay .....	WANG Jian , ZHANG Jun-qiang , REN Han-han , LI Ya-meng , GUO Ying(336)
The Application of Dean Equilibrium Profile Model in the Study on Dynamic Geomorphology of the Northwest Shoal of Shandong Peninsula .....	LIU Cheng , HU Ri-jun , ZHU Long-hai , LIN Ji-jiang , ZHANG Zhuo(348)
Experimental Study on Heat Transfer Characteristics of Plate Heat Exchanger in OTEC System .....	PENG Jing-ping , CHEN Feng-yun , WU Hao-yu , GE Yun-zheng , LIU Lei , LIU Wei-min(359)
Reverse Time Migration of First-order Velocity-stress Dual-phase Medium Equation and GPU Acceleration .....	ZHANG Xiao-bo , LIU Bao-hua , YU Kai-ben , LIU Miao , YANG Zhi-guo , YU Sheng-qi , ZONG Le(366)

### No. 3

Water Exchange Between Western Pacific Warm Pool and Indian Warm Pool and Its climatic Effects Since the Late Miocene .....	LI Tie-gang , XIONG Zhi-fang , JIA Qi(377)
Discrepancies in the Ocean Heat Content of Two EN4 Products .....	ZHANG Min , ZHAO Chang , ZHANG Yuan-ling , JIANG Wen-zheng , WANG Gang(390)
Multi-timescale Variations of the Kuroshio Volume Transport Through PN and TK Sections in the East China Sea .....	XU Da , MA Chao , JU Xia(400)
Development and Application of Adaptive Triangular Mesh Generation Based on DISTMESH .....	ZHANG Jing-ting , WANG Xian-ye , LI Cheng , GE Jian-zhong(412)
Analysis of Arctic Sea Ice Thickness From 2014 to 2018 Based on CryoSat-2 Data .....	ZHANG Ting , ZHANG Jie , ZHANG Xi(425)
Rock-magnetic Properties of Thick Sandy Sediments on the Outer Continental Shelf of East China Sea .....	LIU Jian-xing , SHI Xue-fa , WU Yong-hua , YU Xiao-xiao , SHAN Xin , XU Tao-yu(435)
Design and Implementation of Proton Precession Marine Geomagnetic Base Station .....	LI Xian-feng , ZHENG Yan-peng , HUA Qing-feng , LIU Kai , MA Long , ZHANG Lin-qing(446)
Noise Characteristics Analysis of Sub-Bottom Profiler and Optimization of Field Acquisition Parameters	

.....	ZHANG Bin-bin, ZHAO Guo-xing, WU Yong-ting, ZHANG Dao-jian, ZHANG Hai-quan, SUN Yang, LIU Kai(455)
Diversity and Phylogeny of Intestinal Microbes of the Sea Cucumber (Synallactidae) From the Yap Trench .....	GAO Zhi-yuan, YANG Ji-chao, LIU Wen-feng, HE Pei-qing, CHEN Hao(463)
Phytoplankton Community Structure in the Southern Yellow Sea and East China Sea and Its Relationship With Environmental Factors .....	GUO Shu-jin, YAO Qing-zhen, WEI Chuan-jie, SUN Xiao-xia(476)
Length-varing Empirical Mode Decomposition Method Based on Gray Prediction .....	ZHANG Xiao-bo, LIU Bao-hua, YU Kai-ben, LIU Miao, YANG Zhi-guo, YU Sheng-qi, ZONG Le(493)
Oil Spill Detection From GF-1 Images With Spectral and Textural Features .....	BAO Meng, ZHANG Jie, ZHANG Xi, MENG Jun-min(504)
Study on Performance Analysis of the High-efficiency OTEC Cycle .....	WU Hao-yu, PENG Jing-ping, GE Yun-zheng, LIU Lei, CHEN Feng-yun, LIU Wei-min(513)
Solitary Wave Energy Dissipation by Coastal Vegetation .....	GONG Shang-peng, CHEN Jie, JIANG Chang-bo, HE Fei, LI Jia-hui(522)
Study on Dynamic Uncertainty of Sea-Level Elevation Measured by GNSS Ocean Buoy .....	..... LIANG Guan-hui, TAO Chang-fei, ZHOU Xing-hua, LIU Tong-mu, LIN Guan-ying, HUANG Hua(532)
Stability Design of Small Buoy for Marine Physical Property Monitoring .....	XUE Yu-huan, SUN Bao-nan, TAO Chang-fei, GUAN Sheng, ZHOU Xing-hua(541)

#### No. 4

The Research Progress in Calibration/Validation of Interferometric Altimeter .....	ZHOU Xing-hua, YANG Lei, XU Yong-sheng, ZHU Lin(549)
Numerical Simulation of Semi-diurnal Tidal Waves in the Northern Indian Ocean .....	..... WAN Rong-qiang, WEI Ze-xun, GAO Xiu-min, XU Xiao-qing, TENG Fei(562)
The Spatial-Temporal Variation of Sea Level Anomalies in the Indonesian Throughflow Outflow Region .....	JIN Jiao-yan, WANG Yong-gang, ZHU Yao-hua, XU Teng-fei, LI Shu-jiang(574)
Numerical Study on the Formation Mechanism of the North Pacific Gyre Oscillation .....	..... LÜ Qing-ping, ZHANG Gui, ZHANG Dong-ling, ZHANG Sheng-jun(582)
Effect of Sea Spray on Heat Flux at Low and Medium Wind Speeds .....	LIU Zhan-chi, JIAO Zhi-yong, JIANG Wen-zheng, QIAO Fang-li, DAI De-jun, CHEN Sheng(591)
Numerical Simulation of Multi-scale Temporal Variations of Sea Surface Wind and Wave Field in the Off-shore Area of the Northern Jiangsu Province .....	XU Jin, CAO Yu-han, YANG Yong-zeng, DONG Chang-ming, WANG Jin, ZHU Wei-jun(600)

Characteristics of the Sea Surface Temperature Variation in Adjacent Area of the Yangtze River Estuary	WANG Jie , WANG Jie , XU Jia-feng , LUAN Kui-feng , YANG Yi-jie , LÜ Yang-yang(624)
Study of Marine Geomagnetic Diurnal Variation Correction Based on Wavelet Transform	ZHANG Lian-wei , ZHENG Yan-peng , LIANG Rui-cai , MA Long , LI Xian-feng , LIU Yang-ting , HUA Qing-feng , XIA Cheng-long(635)
Features and Driving Mechanisms of the Intra-seasonal Variation of Sea Surface Chlorophyll <i>a</i> in the South China Sea	LIAN Zhan , WANG Xin-yi , WEI Ze-xun(649)
Composition and Morphology of Hadal Zone Sediment in the South Yap Trench	NI Xin , SUN Cheng-jun , JIN Hong , YANG Gui-peng , DING Hai-bing(662)
Numerical Simulation of the Hydrodynamics Affected by Coastline and Bathymetry Changes in the Bohai Sea	DONG Jiao-jiao , SUN Jian , CHEN Yan-zhen , LIU Chang-gen , MA Hui-min , LIU Chun-hong(676)
Experiment on Formation and Migration of Submarine Sandwaves Under Current Conditions	WANG Cong , SUN Yong-fu , LIU Zhen-wen , ZHOU Qi-kun , SUN Yu-xin(688)
Terrain Evolution of Subaqueous Delta in Chengdao Sea Area Based on IDW	JIANG Wei-da , SUN Yong-fu , LIU Shao-wen , DONG Li-feng , SONG Yu-peng(697)
Predicting Bathymetry in Mariana Trench Using Gravity-geologic Method	WANG Yong-kang , ZHOU Xing-hua , TANG Qiu-hua , WANG Pan-long , JIANG Chuan-ling , LIU Hao , ZHANG Xiao-shou(708)
Snippet Data Processing Based on Kongsberg EM Multibeam Echo Sounder	HU Jun , WU Yong-ting , DOU Hu-lin , LI Zhi-yuan(717)