

2018 年《海洋科学》总目次

第 42 卷

研究报告

基于 LoRa 的海洋多功能信标组网及特性研究	蔡声波, 张峰, 姚鹏(1)1
Huffman 与 LZW 算法在海洋观测浮标通信数据压缩中的应用研究	胡斌, 李忠强, 刘婷婷, 王瀚宇(1)6
无人船系统应用于水库水样离岸采集——以棘洪滩水库为例	金久才, 崔文连, 张杰, 孙立斌(1)11
海洋观测通信组网安全及其硬件加速研究	徐天亮, 王晨旭, 王新胜, 罗清华, 刘志勇, 周志权(1)15
基于无人机自组网的空海一体化组网观测技术	闫朝星, 付林罡, 郑雪峰, 湛明(1)21
多相滤波器在跳频解调中的应用	焦东立, 彭浪, 付林罡(1)28
面向岛礁应急监测的多手段组网设计与实验	杨敏, 徐栋, 王新胜, 王瀚宇(1)32
基于 Pix4Dmapper 的无人机数据自动化处理技术探讨	李忠强, 王瀚宇, 刘婷婷, 胡斌(1)39
无人机组网技术在海洋观测中的应用研究	徐栋, 杨敏, 王新胜, 孙昕雨(1)45
波浪涌动机 [®] 通讯中继在海上应急协同组网监测中的应用	王文广, 叶秀芬, 刘文智, 李海波, 王顺礼, 韩锦亮, 于力明(1)52
海洋观测图像的深度学习检索及 FPGA 在轨实现	韩丽容, 李鹏, 王廷伟, 李慧, 任鹏(1)58
一种面向港口溢油监测的小型激光荧光遥测系统	刘德庆, 栾晓宁, 郭金家, 崔廷伟, 金久才, 郑荣儿(1)65
莱州湾表层沉积物粒度和黏土矿物分布特征与运移趋势分析	冯利, 冯秀丽, 宋涅, 肖晓, 田动会(2)1
西南印度洋龙旗、断桥热液区沉积物中重矿物空间分布特征及其意义	李诗颖, 吕士辉, 苏新, 陶春辉, 李怀明, 周建平(2)10
南海北部东沙隆起西侧陆坡坡折处浊流沉积	周杨锐, 朱友生, 周松望, 刘剑涛, 王世龙, 庄丽华(2)23
极地环境监测网的设计及其在南极普里兹湾的应用	程文芳, 朱建钢, 吴荣荣, 詹德川, 陆大海, 闫可, 郑小罗(2)34
岛屿海岸线自动化提取及其时空变迁研究——以大连市獐子岛为例	丁小松, 单秀娟, 陈云龙, 金显仕, 杨涛(2)46
土体约束对海底管道整体屈曲的影响机理研究	李成凤, 刘润, 彭碧瑶, 王秀妍(2)56
南海区桁杆虾拖网 40 mm 方目分离网片选择性的初步研究	杨炳忠, 杨吝, 谭永光, 晏磊, 张鹏, 李杰(2)64
鼠尾藻中岩藻黄素的提取工艺研究	李红艳, 王璇璇, 李晓, 刘天红, 姜晓东, 孙元芹, 纪蕾, 王颖(2)71
短期低盐度胁迫对驼背鲈(♀)×鞍带石斑鱼(♂)杂交子代幼鱼抗氧化及消化生理的影响	刘玲, 陈超, 李炎璐, 刘莉, 陈建国, 李文升, 马文辉(2)78
凡纳滨对虾幼体不同生长发育时期应答氨氮胁迫的敏感性研究	石祥, 肖容, 邱立国, 周海龙(2)88
量子无线通信技术在海洋环境监测中的应用	李浩, 任宇辉, 刘凤娇(2)94
辽河三角洲沉积物工程地质特征分析	姜建新, 丁喜桂, 冯秀丽, 姜波, 滕珊, 田动会, 王晓明(3)1
近海风电场水下打桩辐射噪声特性测量分析	吉新磊, 杨红, 丁骏, 王春峰(3)11
基于 MODIS 数据的黄渤海海域云检测方法及其应用研究	解本巨, 马浩, 刘国柱(3)17
大黄鱼肝脏免疫保护蛋白的鉴定	吴志鹏, 王三英, 章跃陵(3)23
条纹斑竹鲨 5 个地理群体的简单重复序列中间区域分析	潘滢, 郑利兵, 王军(3)31
浙南近海虾类群落结构及其多样性分析	陈伟峰, 彭欣, 叶深, 谢起浪, 陈少波, 汪振华, 陈骁(3)37
基于沉积物污染风险与生态系统服务价值的环境管理优先级初步研究——以渤海为例	林婉妮, 王诺, 吴暖(3)46
副热带东北太平洋海表温度异常的传递及与 ENSO 的联系	王梦阳, 郑建, 杨宇星, 王法明(4)1
灰度共生矩阵纹理特征对 SAR 海冰漂移监测的增强性能研究	李小娜, 张杰, 戴永寿, 张晰(4)9
埕北海域工程地质分区及模糊数学稳定性评价	姜波, 冯秀丽, 田动会, 王晓明, 姜建新, 滕珊(4)18
近 40 年芝罘湾岸线时空演变及围填海活动评价	杜逢超, 徐艳东, 于宁, 杜冰青(4)28
基于 GIS 的南海海温时空过程分析研究	樊博文, 雷洁霞, 樊彦国(4)36

驯化水温及温升速率对三门湾三种虾蟹类热耐受性的影响	田洪林, 曹亮, 刘金虎, 窦硕增	(4)43
北极黄河站邻近海域浮游细菌多样性初步研究	刘嘉佩, 陈蔷薇, 徐倩, 刘雪珠, 樊英萍, 戴秋萍, 王健鑫	(4)53
氯化锌对松江鲈肾细胞系的毒性效应	梁艳, 白丽雯, 李霞, 秦艳杰, 吴迪, 周诗珈	(4)64
不同温度对极北海带幼苗生长及光合特性的影响	梁洲瑞, 刘福利, 袁艳敏, 杜欣欣, 汪文俊, 孙修涛, 高亚平, 王飞久	(4)71
X 射线荧光光谱法测定海洋沉积物中的 41 种元素及氧化物	孙莹, 宋金明, 温廷宇, 刘瑶	(4)79
山东半岛东部海域表层沉积物微量元素分布及物源指示意义	朱龙海, 张自豪, 刘志杰, 徐永臣, 王楠, 苗晓明	(5)1
菲律宾海深海海底沉积物声学特性与物理性质相关关系	孙志文, 孙蕾, 李官保, 阚光明, 郭常升, 王景强, 孟祥梅	(5)12
渤海叶绿素浓度时空特征分析及其对赤潮的监测	姜德娟, 张华	(5)23
海底底质声学原位测量电路控制系统研究	吕斌, 祁国梁, 李官保, 王景强, 刘杰	(5)32
铜藻繁殖发育过程的研究	李大鹏, 李慧, 张桂军, 马增岭, 辛美丽, 丁刚, 吴海一, 郭文	(5)40
盘锦红海滩土壤理化性质和土壤酶调查	刘欢, 何洁, 樊晓茹, 刘远, 魏海峰, 吴彤, 赵嘉欣, 王腾腾	(5)46
基于生态通道模型的长江口及邻近海域生态系统能流动态分析	王远超, 梁翠, 钱薇薇, 张效嘉	(5)54
海洋芽孢杆菌 <i>Bacillus</i> sp. CAMT22370 所产葡萄糖氧化酶的分离纯化与表征	聂绮倩, 莫日坚, 徐德峰, 孙力军, 王雅玲, 叶日英	(5)68
琼海麒麟菜保护区藻场退化原因分析	于淑楠, 王雅丽, 黄勃, 段泽林, 杨文杰, 张钰, 胡吟胜, 马坤, 刘福欣, 米波	(5)77
冲绳海槽北部柱状沉积物中有机质地球化学特征——对热液活动的指示	黄鑫, 陈法锦, 祁雅莉, 侯庆华, 陈清香, 蒲晓强	(6)1
基于 ArcGIS Engine 与 ArcGIS Server 的海域定级信息管理系统设计与开发	卞盼盼, 白珏莹, 付丹丹, 王英刚, 周立	(6)12
基于模糊数学和改进层次分析法的海水入侵程度评价	虞未江, 贾超, 狄胜同, 袁涵, 朱恒华	(6)19
非线性波消波及波场分布研究	王巧莎, 李明海	(6)30
海流自供电浮标双向轴流叶轮仿真分析	王世明, 申玉, 田卡, 吕超, 白连平	(6)39
珠江口黑鲷海捕群体与不同养殖群体的形态差异比较	刘胜男, 刘岩, 周文礼, 孙典荣, 李腾, 杨长平, 单斌斌, 刘蔓婷	(6)46
海带膳食纤维的理化特性及通便作用研究	谭姣姣, 王晶, 岳洋, 张全斌	(6)53
GFP 标记的迟缓爱德华菌感染诸氏螯虾虎鱼后组织分布研究	余露军, 李建军, 魏远征, 蔡磊, 苗宗余, 黄韧	(6)57
光周期对尖吻鲈仔稚鱼消化酶活性的影响	周胜杰, 胡静, 于刚, 杨其彬, 杨蕊, 刘亚娟, 马振华	(6)63
邻苯二甲酸二丁酯污染对老鼠筋幼苗抗逆性生理特性的影响	赵秋毅, 李元跃, 陈融斌, 潘文, 陈政强, 徐佳佳, 李容伟, 高苏蕊, 刘畅	(6)70
乐清湾大型底栖动物种类和数量组成特征及变化	王航俊, 邹清, 刘亚林, 林义, 吕宝强, 姚炜民	(6)78
刚毛藻对静态模拟刺参养殖池塘上覆水营养盐含量的影响	曹学彬, 马伟伟, 李琦, 吴春梅, 吴彩蜜, 姜爱莉, 邢荣莲	(6)88
山东芝罘湾表层沉积物重金属含量与环境质量评价	王伟, 顾效源, 赵辉, 丁喜桂, 叶思源, 肖楠, 于剑峰, 李金鹏	(7)1
降雨条件下的导航 X 波段雷达海浪参数反演算法研究	马玉菲, 陈忠彪, 张彪, 丘仲锋, 何宜军, 范仲珏, 辛红雨	(7)10
海洋站总氮自动监测仪的研制	王盼盼, 魏福祥, 崔建升, 刘大喜, 何礼	(7)18
一种新型的 6 000 米深水可视可控轻型沉积物柱状取样系统	王冰, 栾振东, 张鑫, 李连福, 连超, 阎军, 陈长安	(7)25
基于中值滤波加权修正的多波束声呐测深数据趋势面滤波方法	张兴伟, 潘国富, 张济博	(7)32
环境要素驱动下的长江口无脊椎动物群聚特征	任庆强, 钱薇薇, 张岩, 刘春龙, 李文龙	(7)40
PEF 结合酶法提取方格星虫 (<i>Sipunculus nudus</i>) 多糖工艺条件	陈文, 王湘君, 邵东旭, 王玉杰, 孙宏元, 公维洁	(7)54

长江口中华鲟自然保护区信息管理系统的设计与实现	佟佳琦, 郭立新, 高春霞, 陈锦辉, 王学昉(7)64
千岛-勘察加俯冲带俯冲特征的空间差异性及其成因的初步探讨	李聪颖, 邢军辉, 李德勇, 宫伟, 郭雨帆, 李朝阳(8)1
1992 年以来盐城滨海湿地植被动态变化研究	张佳佳, 沈永明(8)14
海洋沉积物氨氧化菌群落结构的测序分析	贺惠, 陈阳阳, 王勋功, 甄毓, 米铁柱, 于志刚, 李迎(8)22
烟台四十里湾扇贝养殖区浮游植物群落调查	李希磊, 杨俊丽, 于潇, 吴雪, 崔龙波(8)30
基于 1998~2011 年调查数据的长江口海域浮游动物群落划分	王晓东, 李超伦(8)38
青岛沿海 24 种鱼类耳石称量特征与鱼体大小关系	王英俊, 吴莹莹, 邹琰, 刘童, 刘洪军, 宋爱环(8)48
虾夷扇贝天然苗种筛选装置的研究与应用	张晓芳, 李明智, 王仁海, 刘学民, 赵伟东, 赵德辉, 王犇, 张铎巍, 丁梦豪(8)56
基于多波束测深仪的西太平洋声散射层测量	张超, 吕连港, 姜莹, 杨光兵, 刘宗伟, 杨春梅(9)1
海底管线维护中底床表层稳定粗化层的构建	李近元, 马小川, 阎军(9)10
一种酪氨酸酶基因在笠贝初生壳形成中的表达分析	谭素建, 邝聘, 刘保忠(9)17
不同磷酸根含量的孔石莼多糖体外抗氧化活性研究	蒋南芳, 李炳奎, 李伟达, 刘效磊, 王晓倩, 常新涛, 蔡慧敏(9)22
响应面法优化海藻基活性炭制备工艺及其吸附机理	刘靖, 何选明, 柯萍, 冯东征(9)29
全新世以来辽河三角洲地区的化学风化及其对气候变化的响应	郭若舜, 叶思源, 何磊, 赵俐红(9)38
基于星载红外辐射计的北极海表温度数据对比分析	张精英, 孙伟富, 张杰, 孟俊敏, 马毅(11)1
基于奇异谱分析的深圳近海净初级生产力时间序列研究	张彦南, 王久娟, 段广拓, 陈劲松, 易琳(11)13
适用于快速远程检测海水中氰化物的方法研究	姚竞芳, 袁涛, 敖俊杰, 顾佳媛, 李佳凡(11)24
一株茈降解菌 <i>Bacillus cereus</i> Py5 的分离鉴定	蔡丽希(11)29
潮间带大型海藻孔石莼和鼠尾藻对铜胁迫的生理响应	刘庆, 王小蓓, 李丽霞(11)35
实验室海月水母大规模解体的初步研究	迟艳红, 王玮, 王文章, 黄有松(11)43
pH 胁迫对不同规格刺参生长及免疫酶活性的影响	韩莎, 胡炜, 李成林, 赵斌, 孙永军, 刘兆存(11)51
BP 神经网络精度估计及其在海洋油气资源预测中的应用	赵健, 刘展, 樊彦国, 丁宁(11)59
石岛海域海浪数值模拟及特征分析	苑福利, 刘子洲, 刘晓, 翟方国, 李培良(12)1
一种深海拖曳系统稳健可靠的组合定位方法	杜凯, 吴永亭, 梁文彪, 李治远, 胡俊, 豆虎林(12)15
0903 号台风对我国海上风力发电的影响	吕海滨, 陆银娟, 贺文通, 赵星宇, 刘昱君(12)23
海洋多道地震拖缆数据采集包设计	周洋, 熊晓东, 裴彦良, 阚光明, 连艳红, 吴爱平(12)30
南极绿藻中类菌胞素氨基酸对 UV-B 胁迫的响应	顾智强, 张振华, 徐琰雯, 顾梦娇, 徐强, 朱自强, 钟伯坚(12)37
几种环境因子对皱纹盘鲍的胁迫作用及其阈值	魏姗姗, 罗冬莲, 许翠娅, 杨妙峰, 郑盛华, 郑惠东, 陈月忠, 钱小明(12)47
富营养化和海水盐度对日本鳗草生物量和碳氮含量的协同影响	张璐璐, 韩秋影, 史云峰, 赵牧秋(12)55
大黄鱼 <i>cGAS-like</i> 基因 isoform X1 的克隆鉴定及在感染刺激隐核虫后的表达变化	郑利兵, 洪越群, 洪宇建, 孙恺辉, 洪宇聪(12)62

研究论文

基于 GA-WNN 的极化 SAR 海洋溢油检测方法研究	陈伟民, 丁亚雄, 宋冬梅, 王斌, 刘善伟, 甄宗晋, 张婷, 杨敏(1)70
无人船监视图像反光区域检测与去除方法及实验验证	时俊楠, 金久才, 张杰(1)82
基于空间分布与统计特性的海面远景目标检测方法	刘博文, 戴永寿, 金久才, 李立刚, 邵峰(1)88
无人水面航行器全局路径规划方法研究	蒲红红, 黄海滨(1)93
基于无人机/无人艇的最优动态覆盖观测技术	姚鹏, 慕声波, 黎明(1)106
基于多特征多核学习的全极化 SAR 溢油提取方法	刘善伟, 张世豪, 李翔宇, 张乃心, 张婷(1)112
一种基于有限状态机模型的局部转向避碰路径规划算法	汪栋, 张杰, 金久才, 毛兴鹏(1)119
极化 X 波段雷达海面溢油微波散射模型研究	赵振华, 赵宜楠, 周志权, 赵占锋, 王晨旭(1)128

端口受控哈密顿方法的电力双推进无人船航向航速控制	吕成兴, 于海生, 周忠海, 臧鹤超, 张凤丽, 张照文(1)134
一种基于 GPU 和内存映射文件的高分辨率遥感图像快速处理方法	马秀丹, 崔宾阁, 钟勇, 张永辉, 费东(1)139
面向海上目标搜索任务的多无人机协同航路优化	姚鹏, 慕声波, 解则晓(1)147
基于 DRLSE 模型的 SAR 溢油提取方法	刘善伟, 王婉笛, 李潇, 陈艳拢, 张婷(1)153
南海风暴潮对风场和外围海水敏感性研究	李健, 刘清容, 阮成卿, 阎忠辉, 冀承振(2)99
莱州湾南岸海水入侵变化趋势及成因分析	刘莹, 姜锡仁, 王兴, 李保磊, 姜欢欢(2)108
黄丝藻细胞代谢物提取方法的比较研究	邵慧敏, 王聪, 汪辉, 刘天中(2)118
海南黎安港表层沉积物重金属分布特征及污染评价	陈石泉, 吴钟解, 蔡泽富, 向芸芸, 邢孔敏, 王道儒, 林国尧, 童玉和(2)124
模拟电厂温排水温升和游离余氯对亚心形扁藻生长影响的研究	戴雅奇, 仇建标, 潘利平, 彭欣, 李彬彬, 黄莹莹, 陈雪初(2)134
斑节对虾 <i>GPx3a</i> 基因的分子克隆及表达分析	刘伟, 赵超, 范嗣刚, 王鹏飞, 闫路路, 邱丽华(2)141
山东半岛南北岸砂质海滩剖面时空变化过程分析	岳保静, 窦衍光, 廖晶, 高茂生, 邵家旺, 叶永玉(3)53
中国近海海上新能源开发环境风险综合区划	靳双龙, 陈建(3)63
合浦珠母贝转录因子 <i>PF-CREB3L2</i> 基因的克隆和鉴定	鲁冰, 郑向南, 刘阳嘉, 谢莉萍, 张荣庆(3)77
山东半岛漂浮铜藻和底栖铜藻气囊及生殖托的形态学比较分析	庞云龙, 刘正一, 丁兰平, 付晚涛, 于淑贤, 孙作登, 秦松(3)84
刺参 GPR54-like 受体基因克隆及特征分析	于秋寒, 平洪领, 闫允君, 史会来, 吕振明, 杨静文(3)92
海昆桑提取物对 2 型糖尿病大鼠的降血糖作用研究	李宁, 郭传龙, 王立军, 李晓伟, 刘华, 徐琦, 史大永(3)101
海洋真菌 <i>Rhodotorula mucilagineosa</i> GIM 2.157 介导邻-、间-、对-溴苯乙酮的不对称还原反应	刘慧, 杨振男, 刘岚, 陈碧双(3)106
琼东南盆地深水区钻井岩屑稀土元素地球化学特征及其对沉积物源和环境的指示	姜龙杰, 孙志鹏, 翟世奎, 刘新宇, 尤丽, 曹佳琪, 张爱滨, 毕东杰, 张婉(4)89
莱州湾和牟平近海夏季小型底栖生物群落组成及环境状况分析	蒲思潮, 史本泽, 张光涛, 徐奎栋(4)101
黄渤海近海海藻养殖规模及固碳强度时空分布	曹万云, 肖鲁湘, 王德, 侯金鑫(4)112
刺参真核翻译起始因子基因(<i>eif2s1</i>)的 cDNA 克隆及表达分析	赵业, 杨红生, 李秉钧(4)120
栉孔扇贝 <i>foxl2</i> 基因在卵子发生中的必要性	刘晓玲, 刘军, 王振东, 王振华, 李彦伸, 崔龙波(4)127
亚硝酸盐胁迫对尖吻鲈鱼抗氧化酶活性及皮质醇的影响	胡静, 周胜杰, 杨蕊, 杨其彬, 刘亚娟, 马振华(4)132
江苏重点海域绿潮漂移扩散数值模拟	吉会峰, 刘吉堂, 莫旭冬, 高鑫鑫, 杨波(5)82
基于最小二乘与径向基函数神经网络的海平面变化预测	赵健, 樊彦国, 丁宁(5)92
基于 MCT 耦合器的 WRF-POM 区域海气耦合模式构建及应用	刘武, 杨成荫, 李耀东, 史小康(5)98
光照、温度对黑鲷(♀)×真鲷(♂)杂交子代受精卵孵化效果的影响	刘海林, 张志勇, 张志伟, 许津, 陈淑吟, 贾超峰, 祝斐, 孟乾(5)108
鞍带石斑鱼仔稚鱼骨骼发育与生长特性研究	吕雪娇, 王雨浓, 刘清华, 翟介明, 李军(5)116
绿鳍马面鲀肌肉营养成分分析和营养评价	徐大风, 刘琨, 王鹏飞, 常青, 陈四清, 边力, 刘长琳, 葛建龙(5)122
海鞘内生真菌焦曲霉 <i>Aspergillus ustus</i> TK-5 的化学成分研究	李莉, 李晓明, 李洪雷, Belma Konuklugil, 李鑫, 王斌贵(5)130
栖息地分布与种内竞争对刺参集群特征的影响	辛孝科, 张立斌, 于正林, 杨红生(5)138
桑沟湾微型浮游生物丰度和生物量分布的季节变化	赵燕楚, 赵丽, 张武昌, 刘素美, 蒋增杰, 方建光, 赵苑, 肖天(5)145
海岛经济体脆弱性综合评价与动态演变研究——以舟山市为例	孙剑锋, 秦伟山, 曹万云, 李世泰, 孙海燕(6)96
Landsat-8 OLI 卫星数据的大气校正检验及其应用	阿如汗, 青松, 包玉海(6)107
火箭助推器残骸海上落区监测技术探索与实践	魏巍, 王伟平, 黎广媚, 张志强, 张丞杰, 贺惠忠, 谢武锋, 殷征欣, 李正元(6)116

不同盐度对文蛤(<i>Meretrix meretrix</i>)呼吸代谢及体内酶活性的影响	白奕天, 丁天扬, 李东东, 聂鸿涛, 闫喜武(6)123
水产用微生态制剂耐药性评估及耐药相关遗传元件检测	陈招弟, 李健, 翟倩倩, 常志强, 王佳佳, 葛倩倩(6)132
东太平洋海隆 13°N 表层含金属沉积物物质组成与元素赋存状态	荣坤波, 曾志刚, 武力, 李康(7)70
黑潮流域海温适应性观测敏感区诊断方法研究	崔宝龙, 笕良龙, 过武宏, 韩梅(7)80
连云港近海紫菜养殖区遥感识别、空间变异和驱动分析	卢霞, 顾杨, 王晓静, 林雅丽, 赵倩, 王凯, 刘笑楠, 费鲜芸(7)87
盘锦红海滩重金属与石油污染调查	樊晓茹, 何洁, 刘欢, 刘远, 魏海峰, 陆文婷, 卢希(7)97
北戴河滨海湿地根际石油降解菌的筛选及功能分析	张毅然, 高伟, 张佳林, 徐广飞, 林法祥, 徐希媛, 何昌飞, 韩彬, 郑立(7)105
2016 年秋季热带西太平洋网采浮游植物群落结构	陈卓, 孙军, 张桂成(7)114
双层直立圆弧型防波堤上绕射波浪力的解析计算	翟振峰, 黄华, 詹杰民, 张毅(8)62
西北太平洋中尺度涡半径与涡动能的统计关系	赵军, 高山, 王凡, 陈永利(8)71
东中国海秋季三维环流诊断计算分析	黄海龙, 管卫兵, 郑洋洋, 杨成浩, 王惠群, 杨昀(8)79
烟台夹河口外柱状沉积物还原性无机硫、活性铁的变化特征及其相互关系	姜明, 赵国强, 李兆冉, 盛彦清(8)90
厦金海域珊瑚体内重金属水平和分布特征	宋倩倩, 刘佳英, 倪智, 王海洋, 陆志强(8)98
九孔鲍 <i>BMP-2</i> 基因 cDNA 克隆及表达分析	艾加林, 栗志民, 刘建勇, 申玉春(8)107
垦利碱蓬 <i>Suaeda kenliensis</i> J.W.Xing sp.nov.——碱蓬属一新种	邢军武(9)51
山东省海洋自然灾害综合危险性评估研究	高松, 钟山, 李亚汝, 商杰, 刘清容, 陈胜舰, 尚恒帅(9)55
基于 WRF-SWAN 耦合模式的台风“威马逊”波浪场数值模拟	伍志元, 蒋昌波, 邓斌, 陈杰, 曹永港, 李廉洁(9)64
基于神经网络模型的湛江湾水体有色溶解有机物的遥感估算	余果, 付东洋, 刘大召, 刘贝, 廖珊, 王立安, 张小龙(9)73
MIS 6 期以来西菲律宾海表层营养物质水平演化及其控制因素: 浮游有孔虫 <i>Globigerinoides ruber</i> 的 Cd/Ca 证据	郭景腾, 李铁刚, 熊志方, 仇晓华, 秦秉斌, 常凤鸣(9)81
考虑软土蠕变对强度影响的高桩码头岸坡时变可靠度分析	王元战, 戈浩波, 吴林键(9)88
基于蛋白组学分析杜氏盐藻对不同浓度 CO ₂ 的响应	蔡学花, 顾文辉, 李元翔, 王广策(9)98
中国短毛藻属 <i>Elachista</i> (褐藻门)的分类学研究 I. 两个新种	黄冰心, 姜晶晶, 刘金梅, 栗日孝, 丁兰平(9)107
现代水产种业硅谷建设的几点思考	杨红生(10)1
一种考虑自然气候振荡的趋势估计方法及其在印尼贯穿流多年代际趋势研究中的应用	胡石建(10)8
Al 基牺牲阳极的生物污损——“阳极苞”的解析	马士德, 赵生俊, 刘欣, 李科, 严清冉, 李丽娜, 韩文, 许健平, 王启冉, 张杰, 段继周(10)16
工业纯钛(TA2)在南海三亚海洋环境试验站海水全浸的生物污损与腐蚀	马士德, 郭为民, 刘欣, 王在东, 刘会莲, 符策鹤, 李科, 任海涛, 程坤, 李文军(10)23
热带西太平洋 Y3 和 M2 海山区网采浮游植物群落结构特征	郭术津, 孙晓霞, 郑珊, 罗璇, 朱明亮, 梁俊华(10)31
山东长岛潮间带大型底栖动物生态特征研究	王金宝, 李新正, 王洪法, 徐勇(10)41
中国海域海盘车科(棘皮动物门, 海星纲)种类记述	徐思嘉, 肖宁, 曾晓起(10)53
1998~2017 年国际北极地区海洋科学研究文献计量与发展态势	於维樱, 王琳, 冯志纲, 张灿影(10)64
冷泉系统研究国际发展态势分析	张灿影, 王琳, 於维樱, 冯志纲, 孔秀, 张晓琨(10)82
国际海洋药物研究动态与发展趋势	吕阳(10)94
水东湾地貌形态演变数值模拟	李庆远, 邹志利, 常承书(11)64
冲绳海槽中、南部热液活动区金属硫化物的地球化学特征	蔡宗伟, 翟世奎, 于增慧, 国坤, 王淑杰, 张侠(11)73
条斑紫菜脱落酸合成对高盐胁迫的响应及其对光合作用的保护	余斌, 杨佳丽, 牛建峰, 王广策(11)83
水产品中荧光假单胞菌(<i>Pseudomonas fluorescens</i>) RT-LAMP 可视化检测方法的建立及应用	魏梦泽, 韩姣姣, 芦晨阳, 周君, 陈炯, 曲凌云, 樊景凤, 陈刚, 苏秀榕(11)91
基于伴随同化方法的 Ekman 模型垂向涡动黏性系数时间变化研究	易家成, 高艳秋, 张继才(12)71

三种基于均生函数的统计模型在厄尔尼诺预测中的应用	王瑞英, 肖天贵(12)83
基于 Sentinel-2A 卫星数据面向对象的水边线提取——以如东县为例	崔红星, 杨红(12)94
海洋气团对沿海城市大气环境影响与识别研究	石红旗, 王霄瞳, 张昊阳, 石博欣, 张睿(12)100

研究综述

针对事件链的溢油监测需求分析及组网观测方案初探	靳熙芳, 万剑华, 黄娟, 李晓敏, 杨敏, 丁一(1)158
海洋溢油观测网络性能评价方法研究	吴庚坤, 刘善伟, 杨敏, 鲁法明, 李蓊涛(1)166
球石藻及其生态功能	张健, 李佳芮, 杨璐, 岳娜娜(2)150
异常气候和环境对刺参养殖业的影响及应对策略	胡炜, 李成林, 韩莎, 赵斌, 徐涛(2)159
壳聚糖基吸附材料的制备及其移除水体重金属的应用研究进展	田野, 刘鹰(2)167
珊瑚礁地质稳定性研究现状	安振振, 李广雪, 马妍妍, 徐继尚, 叮咚, 张洋, 闵建雄, 王丽艳(3)113
海底管线冲刷悬空及其抑制技术研究综述	杨少鹏, 拾兵(3)121
中国海洋微塑料污染的研究现状与展望	王西西, 曲长凤, 王文宇, 安美玲, 缪锦来(3)131
中国海域波浪能资源分布及波浪能发电装置适用性研究	胡聪, 毛海英, 尤再进, 石洪源, 高松(3)142
中国经济头足类增殖现状与展望	宋旻鹏, 汪金海, 郑小东(3)149
海洋动物 microRNAs 研究进展与展望	刘小卓, 张晓明, 董波(3)157
风尘石英在物源示踪和古气候研究中的应用	朱潇, 蒋富清(4)141
岩浆作用对海底热液系统物质的贡献	张侠, 翟世奎, 于增慧, 王淑杰, 蔡宗伟(4)153
红藻中红藻糖苷的研究进展	崔晓山, 陈娟娟, 杨锐, 骆其君, 陈海敏(4)162
海洋微塑料物理迁移过程研究进展与展望	李嘉, 李艳芳, 张华(5)155
构造-岩浆作用对热液活动的控制机理: 马努斯海盆为例	马瑶, 殷学博, 王晓媛, 陈帅, 曾志刚(5)163
基于无人机紫外与 SAR 的溢油遥感监测方法研究	张婷, 张杰(6)141
大洋海山及其生态环境特征研究进展	马骏, 宋金明, 李学刚, 李宁, 王启栋(6)150
硅藻 C ₄ 固碳途径的研究进展	刘乾, 米铁柱, 甄毓, 王华龙, 于志刚(7)131
单环刺螭耐硫机制研究进展	刘峰, 李光亚, 赵玉涵, 孙涛, 纪元, 于海瑞(7)141
海洋发光甲藻研究进展	郭木津, 孙晓霞(7)148
海上危化品漂移扩散数值模拟研究进展	陈俊天, 李淑江, 孙俊川, 王新怡, 连展, 王永刚(7)158
海洋温差能开发特点及其对生态环境的影响方式	兰志刚, 李新仲, 姬忠礼, 于汀, 刘强, 李大树(8)116
岛屿环流理论发展回顾及展望	王新怡, 孙宝楠, 王立伟, 连展(8)122
我国海洋滩涂主要污染物的研究概况	何培, 张明明, 李强, 徐阳, 王忠, 凌君芬, 黄金田(8)131
西北太平洋黑潮源区沉积特征及黑潮输入对东海沉积物的影响	王越奇, 宋金明, 袁华茂, 李学刚, 李宁, 段丽琴(9)112
氮杂螺环酸贝类毒素的研究进展	吕金金, 李宏业, 刘洁生, 杨维东(9)127
海洋细菌 SAR86 研究进展	王丹, 吴冬梅, 刘嘉佩, 王健鑫(9)135
北极海冰输出研究综述	毕海波, 杨清华, 梁钰, 王云鹤, 张泽华, 付敏, 黄海军(10)110
钒酸盐可见光催化防污材料研究进展	王毅, 鞠鹏, 张盾(10)125
温度对微食物网生物代谢的影响	张武昌, 赵苑, 董逸, 赵丽, 李海波, 肖天(10)137
中国沿海球形棕囊藻(<i>Phaeocystis globosa</i>)的分类、分布及其藻华	沈萍萍, 齐雨藻, 欧林坚(10)146
中国近海大型底栖动物 DNA 条形码的研究进展	杨梅, 寇琦, 李新正(10)163
西太平洋岛弧-弧后盆地热液活动与硫化物特征	王国槐, 李传顺, 杜德文, 张海桃(11)99
闽三角海域赤潮发生的时空特征	邹晓梅, 林广发, 陈志彪(11)110
国际珊瑚礁领域研究现状及知识图谱分析	马丽丽, 殷建平, 吴跃伟, 冯志纲(11)118
世界海洋捕捞业发展概况、趋势及对我国的启示	史磊, 秦宏, 刘龙腾(11)126
水产动物源胶原蛋白医学应用研究进展	王明超, 李杰, 秦松, 杜振宁, 李文军(12)109

Marine Sciences Volume 42, 2018 Contents

REPORTS

- Investigation of LoRa-based marine multifunction beacon network and its characteristics
..... QI Sheng-bo, ZHANG Feng, YAO Peng(1)5
- Application of Huffman and LZW algorithms in data compression for ocean-observation-buoy communication
..... HU Bin, LI Zhong-qiang, LIU Ting-ting, WANG Han-yu(1)10
- Water sampling from reservoirs in offshore districts using an unmanned surface vehicle: an application for the Ji-hong-tan reservoir
..... JIN Jiu-cai, CUI Wen-lian, ZHANG Jie, SUN Li-e(1)14
- Research on safety and hardware acceleration of ocean observing communication networks
..... XU Tian-liang, WANG Chen-xu, WANG Xin-sheng, LUO Qing-hua, LIU Zhi-yong, ZHOU Zhi-quan(1)20
- Air-sea integrating network for over-sea observation systems based on ad hoc networking using an UAV
..... YAN Chao-xing, FU Lin-gang, ZHENG Xue-feng, CHEN Ming(1)27
- Application of a multiphase filter in frequency hopping demodulationJIAO Dongli, PENG Lang, FU Lin-gang(1)31
- Design and experiment on multi-means networking scheme for emergency monitoring of islands and reefs
..... YANG Min, XU Dong, WANG Xin-sheng, WANG Han-yu(1)38
- Investigation of Pix4Dmapper automatic data-processing technology in unmanned aerial vehicles
..... LI Zhong-qiang, WANG Han-yu, LIU Ting-ting, HU Bin(1)44
- Study of networking and communication technologies of unmanned aerial vehicles and their application in oceanographic observation
..... XU Dong, YANG Min, WANG Xin-sheng, SUN Xin-yu(1)51
- The application of Wave MEPUS™ as a communication gateway for emergency ocean monitoring
.....WANG Wen-guang, YE Xiu-fen, LIU Wen-zhi, LI Hai-bo, WANG Shun-li, HAN Jin-liang, YU Li-ming(1)57
- Deep Hashing Retrieval of ocean observation images and its FPGA in-orbit implementation
..... HAN Li-rong, LI Peng, WANG Ting-wei, LI Hui, REN Peng(1)64
- A small LIF remote detection system for port oil spill monitoring
.....LIU De-qing, LUAN Xiao-ning, GUO Jin-jia, CUI Ting-wei, JIN Jiu-cai, ZHENG Rong-er(1)69
- Surface sediment grain size and clay minerals distribution and transport in the Laizhou Bay
..... FENG Li, FENG Xiu-li, SONG Sheng, XIAO Xiao, TIAN Dong-hui(2)9
- Heavy-mineralogical distribution characteristics of seafloor sediments from Longqi and Duanqiao hydrothermal fields in Southwest Indian Ridge and their geological inferences
..... LI Shi-ying, LÜ Shi-hui, SU Xin, TAO Chun-hui, LI Huai-ming, ZHOU Jian-ping(2)22
- Turbidites at the continental slope on the west side of Dongsha uplift in the northern South China Sea
.....ZHOU Yang-ruì, ZHU You-sheng, ZHOU Song-wang, LIU Jian-tao, WANG Shi-long, ZHUANG Li-hua(2)33
- Design of polar environment monitoring networks of China and demonstration on Prydz Bay
.....CHENG Wen-fang, ZHU Jian-gang, WU Rong-rong, ZHAN De-chuan, LU Da-hai, YAN Ke, ZHENG Xiao-luo(2)45
- Automatic extraction of shorelines and the spatio-temporal changes: A case study of the Zhangzi Islands in Dalian city, China
..... DING Xiao-song, SHAN Xiu-juan, CHEN Yun-long, JIN Xian-shi, YANG Tao(2)55
- Influence of soil constraint on global buckling of submarine pipelines · LI Cheng-feng, LIU Run, PENG Bi-yao, WANG Xiu-yan(2)63
- Preliminary study of selectivity of separator panel with 40 mm square mesh of shrimp beam trawl in the South China Sea
..... YANG Bing-zhong, YANG Lin, TAN Yong-guang, YAN Lei, ZHANG Peng, LI Jie(2)70
- Optimization of fucoxanthin extraction from *Sargassum thunbergii*
..... LI Hong-yan, WANG Xuan-xuan, LI Xiao, LIU Tian-hong, JIANG Xiao-dong, SUN Yuan-qin, JI Lei, WANG Ying(2)77
- Effects of short-term salinity stress on antioxidant and digestive physiology of hybrid progeny (*Cromileptes altivelis* ♀ × *Epinephelus lanceolatus* ♂)..... LIU Ling, CHEN Chao, LI Yan-lu, LIU Li, CHEN Jian-guo, LI Wen-sheng, MA Wen-hui (2)87
- Comparative study on sensitivity of ammonia nitrogen at different life stages of *Litopenaeus vannamei*
..... SHI Xiang, XIAO Rong, QIU Li-guo, ZHOU Hai-long(2)93
- Application of quantum wireless communication technology in environmental monitoring · LI Hao, REN Yu-Hui, LIU Feng-Jiao(2)98

Analysis of the Liaohe Delta sediment engineering geological characteristics in the Liaohe River	JIANG Jian-xin, DING Xi-gui, FENG Xiu-li, JIANG Bo, TENG Shan, TIAN Dong-hui, WANG Xiao-ming(3)10
Measurement analysis on the radiation noise characteristics of underwater piling in offshore wind farm	JI Xin-lei, YANG Hong, DING Jun, WANG Chun-feng(3)16
Study of cloud detection method in the Yellow and Bohai Seas based on MODIS data	XIE Ben-ju, MA Hao, LIU Guo-zhu(3)22
Identification of immunoprotection proteins in the liver tissue of <i>Larimichthys crocea</i>	WU Zhi-peng, WANG San-ying, ZHANG Yue-ling(3)30
Genetic structure analysis of five populations of <i>Chiloscyllium plagiosum</i> using inter-simple sequence repeat molecular markers	PAN Ying, ZHENG Li-bing, WANG Jun(3)36
Community structure and diversity of shrimp species in the coastal area of south Zhejiang	CHEN Wei-feng, PENG Xin, YE Shen, XIE Qi-lang, CHEN Shao-bo, WANG Zhen-hua, CHEN Xiao(3)45
Preliminary establishment of environmental management priorities based on sediment pollution risk and ecosystem service values: Bohai Sea	LIN Wan-ni, WANG Nuo, WU Nuan(3)52
Propagation of the Subtropical Northeastern Pacific SSTA and its correlation with ENSO	WANG Meng-yang, ZHENG Jian, YANG Yu-xing, WANG Fa-ming(4)8
Research on the enhanced performance of texture feature for sea ice drift monitoring based on gray level co-occurrence matrices	LI Xiao-na, ZHANG Jie, DAI Yong-shou, ZHANG Xi(4)17
Engineering geological zoning of Chengbei Sea area and stability assessment using fuzzy mathematics	JIANG Bo, FENG Xiu-li, TIAN Dong-hui, WANG Xiao-ming, JIANG Jian-xin, TENG Shan(4)27
Spatiotemporal evolution of the shoreline and evaluation of sea reclamation during the recent 40 years in Zhifu Bay	DU Feng-chao, XU Yan-dong, YU ning, DU Bing-qing(4)35
Study of spatial and temporal processes of sea temperature in the South China Sea based on GIS	FAN Bo-wen, LEI Jie-xia, FAN Yan-guo(4)42
Impact of the acclimation temperature and warming rate on three common crustaceans in Sanmen Bay, the East China Sea	TIAN Hong-lin, CAO Liang, LIU Jin-hu, DOU Shuo-zeng(4)52
Preliminary study on the diversity of planktonic bacteria in the adjacent sea area of the Arctic Yellow River Station	LIU Jia-pei, CHEN Qiang-wei, XU Qian, LIU Xue-zhu, FAN Ying-ping, DAI Qiu-ping, WANG Jian-xin(4)63
Study on the cytotoxicity of zinc chloride to <i>Trachidermus fasciatus</i> kidney cell lines <i>in vitro</i>	LIANG Yan, BAI Li-wen, LI Xia, QIN Yan-jie, WU Di, ZHOU Shi-jia(4)70
Effect of different temperatures on growth and photosynthetic characteristic of <i>Laminaria hyperborea</i> young seedling	LIANG Zhou-rui, LIU Fu-li, YUAN Yan-min, DU Xin-xin, WANG Wen-jun, SUN Xiu-tao, GAO Ya-ping, WANG Fei-jiu(4)78
Determination of 41 elements and oxides in marine sediments by X-ray fluorescence spectrometry	SUN Xuan, SONG Jin-ming, WEN Ting-yu, LIU Yao(4)88
The distribution of trace elements of the surface sediments in the eastern Shandong Peninsula and its indication significance	ZHU Long-hai, ZHANG Zi-hao, LIU Zhi-jie, XU Yong-chen, WANG Nan, MIAO Xiao-ming(5)11
The relationship between the acoustic characteristics and physical properties of deep-sea sediments in the Philippine Sea	SUN Zhi-wen, SUN lei, LI Guan-bao, KAN Guang-ming, GUO Chang-sheng, WANG Jing-qiang, MENG Xiang-mei(5)22
Analysis of spatial and temporal characteristics of chlorophyll- <i>a</i> concentration and red tide monitoring in Bohai Sea	JIANG De-juan, ZHANG Hua(5)31
Technology of a circuit control system for in-situ acoustical measurement of ocean floor sediments	LÜ Bin, QI Guo-liang, LI Guan-bao, WANG Jing-qiang, LIU Jie(5)39
Studies on the reproduction and development of <i>Sargassum horneri</i>	LI Da-peng, LI Hui, ZHANG Gui-jun, MA Zeng-ling, XIN Mei-li, DING Gang, WU Hai-yi, GUO Wen(5)45
A preliminary study on the reasons for the degradation of <i>S. heteroptera</i> —soil physical and chemical properties and soil enzyme investigation	LIU Huan, HE Jie, FAN Xiao-ru, LIU Yuan, WEI Hai-feng, WU Tong, ZHAO Jia-xin, WANG Teng-teng(5)53
Ecopath based dynamic analyses of energy flows of Yangtze estuary and its adjacent waters	WANG Yuan-chao, LIANG Cui, XIAN Wei-wei, ZHANG Xiao-jia(5)67
Purification and characterization of the glucose oxidase from a marine strain <i>Bacillus</i> sp. CAMT22370	NIE Qi-qian, MO Ri-jian, XU De-feng, SUN Li-jun, WANG Ya-ling, YE Ri-ying(5)76

Causative analysis on eucheuma degeneration in Qionghai eucheuma nature reserve	YU Shu-nan, WANG Ya-li, HUANG Bo, DUAN Ze-lin, YANG Wen-jie, ZHANG Yu, HU Yin-sheng, MA Kun, LIU Fu-xin, MI Bo(5)81
The geochemical characteristics of organic matter in sediment core of the northern of Okinawa Trough: implication for hydrothermal activity	HUANG Xin, CHEN Fa-jin, QI Ya-li, HOU Qing-hua, CHEN Qing-xiang, PU Xiao-qiang(6)11
Design and development of sea area grading information management system based on ArcGIS Engine and ArcGIS Server	BIAN Pan-pan, BAI Jue-ying, FU Dan-dan, WANG Ying-gang, ZHOU Li(6)17
Evaluation of seawater intrusion degree based on fuzzy mathematics and improved analytic hierarchy process	YU Wei-jiang, JIA Chao, DI Sheng-tong, YUAN Han, ZHU Heng-hua(6)29
Study of nonlinear wave absorption and the wave fields	WANG Qiao-sha, LI Ming-hai(6)38
Simulation analysis of two-way axial flow impeller of self-powered buoy	WANG Shi-ming, SHEN Yu, TIAN Ka, LÜ Chao, BAI Lian-ping(6)45
Comparison of <i>Acanthopagrus schlegelii</i> morphological differences between marine fishing population and the different breeding populations in the Pearl River Estuary	LIU Sheng-nan, LIU Yan, ZHOU Wen-li, SUN Dian-rong, LI Teng, YANG Chang-ping, SHAN Bin-bin, LIU Man-ting(6)52
Physicochemical properties and laxative effect of dietary fiber from <i>Saccharina japonica</i>	TAN Jiao-jiao, WANG Jing, YUE Yang, ZHANG Quan-bin(6)56
Infection kinetics of GFP-Labeled <i>Edwardsiella tarda</i> in <i>Mugilogobius chulae</i>	YU Lu-jun, LI Jian-jun, WEI Yuan-zheng, CAI Lei, MIAO Zong-yu, HUANG Ren(6)62
Effects of photoperiod on digestive enzyme activity in larval and juvenile barramundi <i>Lates calcarifer</i> (Bloch)	ZHOU Sheng-jie, HU Jing, YU Gang, YANG Qi-bin, YANG Rui, LIU Ya-juan, MA Zhen-hua(6)69
Effects of dibutyl phthalate pollution on stress resistance physiological characters of the <i>Acanthus ilicifolius</i> L. seedlings	ZHAO Qiu-yi, LI Yuan-yue, CHEN Rong-bin, PAN Wen, CHEN Zheng-qiang, XU Jia-jia, LI Rong-wei, GAO Su-rui, LIU Chang(6)77
The characteristics and changes of the species and quantity of macrobenthos in Yueqing Bay	WANG Hang-jun, ZOU Qing, LIU Ya-lin, LIN Yi, LÜ Bao-qiang, YAO Wei-min(6)87
Effect of <i>Cladophora</i> sp. on the content of nutrient in sediment-water interface from the pond breeding of <i>Apostichopus japonicus</i>	CAO Xue-bin, MA Wei-wei, LI Qi, WU Chun-mei, WU Cai-mi, JIANG Ai-li, XING Rong-lian(6)95
Distribution and environment assessment of heavy metals in sediments of the Zhifu Bay	WANG Wei, GU Xiao-yuan, ZHAO Hui, DING Xi-gui, YE Si-yuan, XIAO Nan, YU Jian-feng, LI Jin-peng(7)9
Study on the retrieval of wave parameters from X-band marine radar under rainy condition	MA Yu-fei, CHEN Zhong-biao, ZHANG Biao, QIU Zhong-feng, HE Yi-jun, FAN Zhong-jue, XIN Hong-yu(7)17
The development of total nitrogen automatic monitor of ocean station	WANG Pan-pan, WEI Fu-xiang, CUI Jian-sheng, LIU Da-xi, HE Li(7)24
A novel monitorable and controlable long-coring system with maximum operating depth 6 000 m	WANG Bing, LUAN Zhen-dong, ZHANG Xin, LI Lian-fu, LIAN Chao, YAN Jun, CHEN Chang-an(7)31
Trend surface filtering method for multibeam sonar echosounding data based on median filter weighed correction	ZHANG Xing-wei, PAN Guo-fu, ZHANG Ji-bo(7)39
Assemblage characteristics of invertebrates in the Yangtze River Estuary driven by environmental factors	REN Qing-qiang, XIAN Wei-wei, ZHANG Yan, LIU Chun-long, LI Wen-long(7)53
The polysaccharide extraction process by PEF enzyme binding method from <i>Sipunculus nudus</i>	CHEN Wen, WANG Xiang-jun, SHAO Dong-xu, WANG Yu-jie, SUN Hong-yuan, GONG Wei-jie(7)63
Design and implementation of Shanghai Yangtze Estuarine Nature Reserve for Chinese sturgeon information management System	TONG Jia-qi, GUO Li-xin, GAO Chun-xia, CHEN Jin-hui, WANG Xue-fang(7)69
The spatial difference and its causes of subduction characteristics in the Kuril-Kamchatka subduction zone	LI Cong-ying, XING Jun-hui, LI De-yong, GONG Wei, GUO Yu-fan, LI Chao-yang(8)13
Dynamic changes of coastal wetland vegetation in Yancheng	ZHANG Jia-jia, SHEN Yong-ming(8)21
Analysis of ammonia-oxidizing bacterial community structure in marine sediments using different sequencing technologies	HE Hui, CHEN Yang-yang, WANG Xun-gong, ZHEN Yu, MI Tie-zhu, YU Zhi-gang, LI Ying(8)29

- Investigation of phytoplankton community in the scallop culture area of Sishili Bay in Yantai
 LI Xi-lei, YANG Jun-li, YU Xiao, WU Xue, CUI Long-bo(8)37
- Classification of zooplankton communities in the adjacent waters of the Changjiang River estuary based on data from 1998 to 2011
WANG Xiao-dong, LI Chao-lun(8)47
- Relationship between fish size and otolith measurements for fish species caught in the coast of Qingdao, China
 WANG Ying-jun, WU Ying-ying, ZOU Yan, LIU Tong, SONG Ai-huan(8)55
- Research and application of a screening device for natural seedlings of the scallop *Patinopecten yessoensis*
 ZHANG Xiao-fang, LI Ming-zhi, WANG Ren-hai, LIU Xue-min,
 ZHAO Wei-dong, ZHAO De-hui, WANG Ben, ZHANG Duo-wei, DING Meng-hao(8)61
- Research on the sound-scattering layer in the western Pacific observed with a multibeam sounding system
ZHANG Chao, LÜ Lian-gang, JIANG Ying, YANG Guang-bing, LIU Zong-wei, YANG Chun-mei(9)9
- Construction of stable armoring layers on seabed during submarine pipeline maintenance
LI Jin-yuan, MA Xiao-chuan, YAN Jun(9)16
- The expression pattern of a tyrosinase gene potentially involved in early larval shell biogenesis of the limpet *Lottia goshimai*
 TAN Su-jian, HUAN Pin, LIU Bao-zhong(9)21
- Antioxidant activity of different phosphate content derivatives of polysaccharide extracted from *Ulva pertusa* in vitro
JIANG Nan-fang, LI Bing-xi, LI Wei-da, LIU Xiao-lei, WANG Xiao-qian, CHANG Xin-tao, QI Hui-min(9)28
- Optimizing the production of *Ulva*-based activated carbon through response surface methodology and its adsorption mechanism
LIU Jing, HE Xuan-ming, KE Ping, FENG Dong-zheng(9)37
- Chemical weathering and its implications regarding climate changes in the Liaohe Delta since the Holocene
GUO Ruo-shun, YE Si-yuan, HE Lei, ZHAO Li-hong(9)50
- Comparative analysis of Arctic sea surface temperature data based on spaceborne infrared radiometer
ZHANG Jing-ying, SUN Wei-fu, ZHANG Jie, MENG Jun-min, MA Yi(11)12
- Study of the time series of net primary productivity in Shenzhen coastal waters based on singular spectrum analysis
ZHANG Yan-nan, WANG Jiu-juan, DUAN Guang-tuo, CHEN Jin-song, YI Lin(11)23
- A method for rapid and remote detection of cyanides in seawater
YAO Jing-fang, YUAN Tao, AO Jun-jie, GU Jia-yuan, LI Jia-fan(11)28
- Isolation and characterization of a pyrene-degrading bacterial strain *Bacillus cereus* Py5 CAI Li-xi(11)34
- Physiological response of intertidal marine macroalgae *Ulva pertusa* and *Sargassum thunbergii* to heavy metal copper stress
LIU Qing, WANG Xiao-bei, LI Li-xia(11)42
- Preliminary studies on large-scale moon jellyfish *Aurelia aurita* decomposition under laboratory conditions
CHI Yan-hong, WANG Wei, WANG Wen-zhang, HUANG You-song(11)50
- Effect of pH stress on growth and activities of immune enzyme of different-sized sea cucumber, *Apostichopus japonicus* Selenka
HAN Sha, HU Wei, LI Cheng-lin, ZHAO Bin, SUN Yong-jun, LIU Zhao-cun(11)58
- Precision estimation of BP neural network and its application in ocean oil and gas resources prediction
ZHAO Jian, LIU Zhan, FAN Yan-guo, DING Ning(11)63
- Numerical simulation and analysis of the characteristics of significant wave height in Shidao
YUAN Fu-li, LIU Zi-zhou, LIU Xiao, ZHAI Fang-guo, LI Pei-liang(12)14
- Stable and credible combined position method for deep towing systems
DU Kai, WU Yong-ting, LIANG Wen-biao, LI Zhi-yuan, HU Jun, DOU Hu-lin(12)22
- Impact of typhoon No.0903 on offshore wind power generation in China
LÜ Hai-bin, LU Yin-juan, HE Wen-tong, ZHAO Xing-yu, LIU Yu-jun(12)29
- Design of a data acquisition package for a marine multi-channel seismic streamer
ZHOU Yang, XIONG Xiao-dong, PEI Yan-liang, KAN Guang-ming, LIAN Yan-hong, WU Ai-ping(12)36
- Study of response of mycosporine-like amino acids in Antarctic green algae to UV-B radiation
GU Zhi-qiang, ZHANG Zhen-hua, XU Yan-wen, GU Meng-jiao, XU Qiang, ZHU Zi-qiang, ZHONG Bo-jian(12)46
- Stress and early warning threshold of several environmental factors on *Haliotis discus hannai* Ino
WEI Shan-shan, LUO Dong-lian, XU Cui-ya, YANG Miao-feng,
 ZHENG Sheng-hua, ZHENG Hui-dong, CHEN Yue-zhong, QIAN Xiao-ming(12)54

Synergistic effects of eutrophication and salinity on biomass and carbon and nitrogen contents of *Zostera japonica*
 ZHANG Lu-lu, HAN Qiu-ying, SHI Yun-feng, ZHAO Mu-qiu(12)61

Molecular identification of cyclic GMP-AMP synthase-like (*cGAS*) isoform X1 of *Larimichthys crocea* and its expression
 change after the challenge with *Cryptocaryon irritans*
 ZHENG Li-bing, HONG Yue-qun, HONG Yu-jian, SUN Kai-hui, HONG Yu-cong(12)70

ARTICLES

Ocean oil-spill detection using Pol-SAR data based on GA-WNN
 CHEN Wei-min, DING Ya-xiong, SONG Dong-mei, WANG Bin, LIU Shan-wei, ZHEN Zong-jin, ZHANG Ting, YANG Min(1)81

A detection and removal method for specular regions in USV monitoring images and experimental verification
 SHI Jun-nan, JIN Jiu-cai, ZHANG Jie(1)87

Marine farsighted target-detection method based on spatial distribution and statistical characteristics
 LIU Bo-wen, DAI Yong-shou, JIN Jiu-cai, LI Li-gang, SHAO Feng(1)92

Global path planning algorithm for unmanned surface vehicle PU Hong-hong, HUANG Hai-bin(1)105

Optimal dynamic coverage for UAV/USV surveillance YAO Peng, QI Sheng-bo, LI Ming(1)111

Full polarimetric SAR oil-spill extraction method based on multi-feature and multi-kernel learning
 LIU Shan-wei, ZHANG Shi-hao, LI Xiang-yu, ZHANG Nai-xin, ZHANG Ting(1)118

Local steering collision avoidance path planning algorithm based on finite state machine model
 WANG Dong, ZHANG Jie, JIN Jiu-cai, MAO Xing-peng(1)127

Development of microwave scattering model for sea-surface oil spills based on polarimetric X-band radar data
 ZHAO Zhen-hua, ZHAO Yi-nan, ZHOU Zhi-quan, ZHAO Zhan-feng, WANG Chen-xu(1)133

Speed and heading control of unmanned surface vehicles system based on port-controlled hamiltonian (PCH) control method
 LÜ Cheng-xing, YU Hai-sheng, ZHOU Zhong-hai, ZANG He-chao, ZHANG Feng-li, ZHANG Zhao-wen(1)138

A fast processing method for high-resolution remote sensing image based on GPU and memory mapping file
 MA Xiu-dan, CUI Bin-ge, ZHONG Yong, ZHANG Yong-hui, FEI Dong(1)146

Cooperative path optimization of multi-UAVs when searching for maritime targets YAO Peng, QI Sheng-bo, XIE Ze-xiao(1)152

SAR oil-spill extraction method based on DRLSE model
 LIU Shan-wei, WANG Wan-di, LI Xiao, CHEN Yan-long, ZHANG Ting(1)157

Study of storm surge sensitivity with typhoon and external seawater in the South China Sea
 LI Jian, LIU Qing-rong, RUAN Cheng-qing, YIN Zhong-hui, JI Cheng-zhen(2)107

The trend and influencing factors of seawater intrusion in the south coast of the Laizhou Bay
 LIU Ying, JIANG Xi-ren, WANG Xing, LI Bao-lei, JIANG Huan-huan(2)117

Comparison of metabolome extraction strategies from *Tribonema minus*
 SHAO Hui-Min, WANG Cong, WANG Hui, LIU Tian-Zhong(2)123

Distribution characteristics and pollution evaluation of heavy metals in the surface sediments of Li'an lagoon, Hainan province
 CHEN Shi-quan, WU Zhong-jie, CAI Ze-fu, XIANG Yun-yun, XING Kong-min, WANG Dao-ru, LIN Guo-yao, TONG Yu-he(2)133

Study on the effects of thermal discharge temperature increase and free residual chlorine from an electric power plant on *Platymonas
 subcordiformis* DAI Ya-qi, QIU Jian-biao, PAN Li-ping, PENG Xin, LI Bin-bin, HUANG Ying-ying, CHEN Xue-chu(2)140

Molecular cloning and expression analysis of glutathione peroxidase 3a gene from black tiger shrimp (*Penaeus monodon*)
 LIU Wei, ZHAO Chao, FAN Si-gang, WANG Peng-fei, YAN Lu-lu, QIU Li-hua(2)149

Spatial and temporal variabilities of northern and southern sandy-coast beach profiles on Eastern Shandong Peninsula
 YUE Bao-jing, DOU Yan-guang, LIAO Jing, GAO Mao-sheng, SHAO Jia-wang, YE Yong-yu(3)62

Regionalization of environmental risk for renewable energy development in China's coastal seas JIN Shuang-long, CHEN Jian(3)76

Cloning and mineralization-related functions of the *PF-CREB3L2* gene in *Pinctada fucata*
 LU Bing, ZHENG Xiang-nan, LIU Yang-jia, XIE Li-ping, ZHANG Rong-qing(3)83

Morphological comparison and analysis of the vesicle and receptacle of floating and attached *Sargassum horneri* in Shandong
 peninsula PANG Yun-long, LIU Zheng-yi, DING Lan-ping, FU Wan-tao, YU Shu-xian, SUN Zuo-deng, QIN Song(3)91

Molecular cloning and characterization of GPR54-like receptor in the sea cucumber *Apostichopus japonicas*
 YU Qiu-han, PING Hong-ling, YAN Yun-jun, SHI Hui-lai, LÜ Zhen-ming, YANG Jing-wen(3)100

- Hypoglycemic activity of Haikunsang mixture on rats with type 2 diabetes mellitus
 LI Ning, GUO Chuan-long, WANG Li-jun, LI Xiao-wei, LIU Hua, XU Qi, SHI Da-yong(3)105
- Asymmetric bioreduction of *o*-, *m*-, and *p*-bromo acetophenone by whole cells of marine-derived fungi
 LIU Hui, YANG Zhen-nan, LIU Lan, CHEN Bi-shuang(3)112
- The sedimentary environment and provenance analysis based on geochemical characteristics of rare-earth elements in deep-water well core of the Qiongdongnan Basin JIANG Long-jie, SUN Zhi-peng, ZHAI Shi-kui, LIU Xin-yu, YOU Li, CAO Jia-qi, ZHANG Ai-bin, BI Dong-jie, ZHANG Wan(4)100
- Meiofaunal community structure and environmental conditions in Laizhou Bay and the Muping offshore area in summer
 PU Si-chao, SHI Ben-ze, ZHANG Guang-tao, XU Kui-dong(4)111
- Temporal and spatial distributions of carbon sink capacity and scale of algae culture in the Yellow and Bohai Seas
 CAO Wan-yun, XIAO Lu-xiang, WANG De, HOU Jin-xin(4)119
- Molecular cloning of sea cucumber eukaryotic translation initiation factor (*eif2s1*) gene and its expression analysis
 ZHAO Ye, YANG Hong-sheng, LI Bing-jun(4)126
- Necessity of *foxl2* in the oogenesis of the scallop *Chlamys farreri*
 LIU Xiao-ling, LIU Jun, WANG Zhen-dong, WANG Zhen-hua, LI Yan-shen, CUI Long-bo(4)131
- Effect of acute nitrite on antioxidant enzymes and cortisol in juvenile *Lates calcarifer*
 HU Jing, ZHOU Sheng-jie, YANG Rui, YANG Qi-bin, LIU Ya-juan, MA Zhen-hua(4)140
- Numerical simulation of the green tide drift and diffusion in the sea areas of Jiangsu Province
 JI Hui-feng, LIU Ji-tang, MO Xu-dong, GAO Xin-xin, YANG Bo(5)91
- Sea level anomaly forecasting using least square and the Radial Basis Function neural network
 ZHAO Jian, FAN Yan-guo, DING Ning(5)97
- The development and application of the WRF-POM regional air-sea coupled model based on the MCT coupler
 LIU Wu, YANG Cheng-yin, LI Yao-dong, SHI Xiao-kang(5)107
- Effect of illumination and temperature on zygote hatching and larval survival of hybrids obtained from *Acanthopagrus schlegelii* (♀) × *Pagrosomus major* (♂)
 LIU Hai-lin, ZHANG Zhi-yong, ZHANG Zhi-wei, XU Jin, CHEN Shu-yin, JIA Chao-feng, ZHU Fei, MENG Qian(5)115
- Research on skeletal development and allometric growth in larval and juvenile *Epinephelus lanceolatus*
 LÜ Xue-jiao, WANG Yu-nong, LIU Qing-hua, ZHAI Jie-ming, LI Jun(5)121
- Analysis of nutritional composition in the muscle of *Thamnaconus septentrionalis*
 XU Da-feng, LIU Kun, WANG Peng-fei, CHANG Qing, CHEN Si-qing, BIAN Li, LIU Chang-lin, GE Jian-long(5)129
- Chemical constituents of *Aspergillus ustus* TK-5, an endophytic fungus derived from the ascidian *Herdmania momus*
 LI Li, LI Xiao-ming, LI Hong-lei, BELMA Konuklugil, LI Xin, WANG Bin-gui(5)137
- Effects of habitat distribution and intraspecific competition on aggregation features of sea cucumber *Apostichopus japonicus*
 XIN Xiao-ke, ZHANG Li-bin, YU Zheng-lin, YANG Hong-sheng(5)144
- Seasonal variation of the abundance and biomass of picoplankton in the Sanggou Bay
 ZHAO Yan-chu, ZHAO Li, ZHANG Wu-chang, LIU Su-mei, JIANG Zeng-jie, FANG Jian-guang, ZHAO Yuan, XIAO Tian(5)154
- Comprehensive evaluation and dynamic evolution of vulnerability of island economies——taking Zhoushan as an example
 SUN Jian-feng, QIN Wei-shan, LI Shi-tai(6)106
- The inspection and application of atmospheric correction algorithm in Landsat-8 OLI data
 A Ru-han, QING Song, BAO Yu-hai(6)115
- Exploration and practice of technology on observing launch vehicle booster on the sea
 WEI Wei, WANG Wei-ping, LI Guang-mei, ZHANG Zhi-qiang, ZHANG Cheng-jie, HE Hui-zhong, XIE Wu-feng, YIN Zheng-xin, LI Zheng-yuan(6)122
- Effects of different salinity on respiratory metabolism and enzyme activities of *Meretrix meretrix*
 BAI Yi-tian, DING Tian-yang, LI Dong-dong, NIE Hong-tao, YAN Xi-wu(6)131
- Assessment of drug resistance and detection of resistance genes and mobile genetic elements of aquatic microecologic agents
 CHEN Zhao-di, LI Jian, ZHAI Qian-qian, CHANG Zhi-qiang, WANG Jia-jia, GE Qian-qian(6)140
- Composition and element occurrence states of recent metalliferous sediments from the East Pacific Rise at 13°N
 RONG Kun-bo, ZENG Zhi-gang, WU Li, LI Kang(7)79

Research on the identification of ocean sensitive area in adaptive observation for the temperature of the Kuroshio watershed	CUI Bao-long, DA Liang-long, GUO Wu-hong, HAN Mei(7)86
The identification of <i>Porphyra</i> culture area by remote sensing and spatial distribution change and driving factors analysis	LU Xia, GU Yang, WANG Xiao-jing, LIN Ya-li, ZHAO Qian, WANG Kai, LIU Xiao-nan, FEI Xian-yun(7)96
Investigation of heavy metals and petroleum of red beach in Panjin	FAN Xiao-ru, HE Jie, LIU Huan, LIU Yuan, WEI Hai-feng, LU Wen-ting, LU Xi(7)104
Isolation and functional evaluation of oil degrading bacteria in the rhizosphere of Beidaihe coastal wetlands	ZHANG Yi-ran, GAO Wei, ZHANG Jia-lin, XU guang-fei, LIN Fa-xiang, XU Xi-yuan, HE Chang-fei, HAN Bin, ZHENG Li(7)113
Netz-phytoplankton community structure of the tropical Western Pacific Ocean in summer 2016	CHEN Zhuo, SUN Jun, ZHANG Gui-cheng(7)130
Analysis of diffracted wave force on a double-layered vertical arc-shaped breakwater	ZHAI Zhen-feng, HUANG Hua, ZHAN Jie-min, ZHANG Ao(8)70
Statistical relationship between mesoscale eddy radius and eddy kinetic energy in the Northwestern Pacific	ZHAO Jun, GAO Shan, WANG Fan, CHEN Yong-li(8)78
Diagnostic analysis of three-dimensional circulation in the East China Sea during autumn	HUANG Hai-long, GUAN Wei-bing, ZHENG Yang-yang, YANG Cheng-hao, WANG Hui-qun, YANG Yun(8)89
Distribution characteristics and relationship between reduced inorganic sulfur and reactive iron in core sediments outside the mouth of the Jiahe River in Yantai	JIANG Ming, ZHAO Guo-qiang, LI Zhao-ran, SHENG Yan-qing(8)97
The level and distribution of heavy metals in coral in the Xiamen-Kinmen sea area	SONG Qian-qian, LIU Jia-ying, NI Zhi, WANG Hai-yang, LU Zhi-qiang(8)106
Molecular cloning and expression analysis of <i>BMP-2</i> cDNA in <i>Haliotis diversicolor supertexta</i>	AI Jia-lin, LI Zhi-min, LIU Jian-yong, SHEN Yu-chun(8)115
<i>Suaeda kenliensis</i> J.W.Xing sp.nov.—A new woody species of <i>Suaeda</i> from Shandong, China	XING Jun-wu(9)54
A comprehensive study on the hazard assessment of marine disasters in Shandong Province	GAO Song, ZHONG Shan, LI Ya-ru, CHEN Sheng-jian, SHANG Jie, LIU Qing-rong, SHANG Heng-shuai(9)63
Simulation of extreme waves generated by Typhoon Rammasun (1409) based on coupled WRF-SWAN model	WU Zhi-yuan, JIANG Chang-bo, DENG Bin, CHEN Jie, CAO Yong-gang, LI Lian-jie(9)72
Remote sensing estimation of colored dissolved organic matter in the water body of Zhanjiang Bay based on neural network model	YU Guo, FU Dong-yang, LIU Da-zhao, LIU Bei, LIAO Shan, WANG Li-an, ZHANG Xiao-long(9)80
The variations and controls of surface ocean nutrient concentration in the West Philippine Sea since MIS 6: evidence from Cd/Ca in planktonic foraminifera <i>Globigerinoides ruber</i>	GUO Jing-teng, LI Tie-gang, XIONG Zhi-fang, QIU Xiao-hua, QIN Bing-bin, CHANG Feng-ming(9)87
Time-variant reliability analysis of bank slope of open type wharf on piles considering the effect of soft soil creep on strength	WANG Yuan-zhan, GE Hao-bo, WU Lin-jian(9)97
The physiological and metabolic response of <i>Dunaliella salina</i> to different concentrations of CO ₂ based on proteomics	CAI Xue-hua, GU Wen-hui, LI Yuan-xiang, WANG Guang-ce(9)106
The morphological taxonomy on genus <i>Elachista</i> (Choradariales, Phaeophyta) in China Seas I. Two new species	HUANG Bing-xin, JIANG Jing-jing, LIU Jin-mei, LUAN Ri-xiao, DING Lan-ping(9)111
Several strategies for the modernization of the construction of the aquaculture seed industry silicon valley	YANG Hong-sheng(10)7
A trend estimation method considering natural climate fluctuation and its application in the study of multi-decadal trend of Indonesian Throughflow	HU Shi-jian(10)15
Biofouling of Al based sacrificial anode—analysis of “anode bract”	MA Shi-de, ZHAO Sheng-jun, LIU Xin, LI Ke, YAN Qing-ran, LI Li-na, HAN Wen, XU Jian-pin, WANG Qi-ran, ZHANG Jie, DUAN Ji-zhou(10)22
Biofouling and corrosion analyses of industrial pure Titanium (TA ₂) immersed in seawater at Sanya marine environmental test station in South China Sea	MA Shi-de, GUO Wei-min, LIU xin, WANG Zai-dong, LIU Hui-lian, FU Ce-hu, LI Ke, REN Hai-tao, CHENG Kun, LI Wen-jun(10)30
Net phytoplankton community structure in the Y3 and M2 seamount zone in the Western Tropical Pacific	GUO Shu-jin, SUN Xiao-xia, ZHENG Shan, LUO Xuan, ZHU Ming-liang, LIANG Jun-hua(10)40

Macrobenthic ecology in the intertidal zones of Changdao Islands in Shandong Province	WANG Jin-bao, LI Xin-zheng, WANG Hong-fa, XU Yong(10)52
Records of the Asteroidea(Echinodermata, Asterozoa) from the Chinese waters	XU Si-jia, XIAO Ning, ZENG Xiao-qi(10)63
Bibliometric analysis and development trends of global Arctic marine scientific research	YU Wei-ying, WANG Lin, FENG Zhi-gang, ZHANG Can-ying(10)81
Trends and hot spots in international cold seep research	ZHANG Can-ying, WANG Lin, YU Wei-ying, FENG Zhi-gang, ZHANG Xiao-kun(10)93
Research activities and development trends in international marine drug research	LÜ Yang(10)102
Numerical simulation of the evolution of the morphological features of Shuidong Bay	LI Qing-yuan, ZOU Zhi-li, CHANG Cheng-shu(11)72
Geochemical characteristics of hydrothermal sulfide from the middle and southern hydrothermal fields in the Okinawa Trough	CAI Zong-wei, ZHAI Shi-kui, Zeng-hui, GUO Kun, WANG Shu-jie, ZHANG Xia(11)82
Synthesis of abscisic acid in <i>Pyropia yezoensis</i> and its protection on photosynthesis under high-salinity stress	YU Bin, YANG Jia-li, NIU Jian-feng, WANG Guang-ce(11)90
Establishment and application of RT-LAMP visual detection method for <i>Pseudomonas fluorescens</i> in aquatic products	WEI Meng-ze, HAN Jiao-jiao, LU Chen-yang, ZHOU Jun, CHEN Jiong, QU Ling-yun, FAN Jing-feng, CHEN Gang, SU Xiu-rong(11)98
Estimation of the time-varying vertical eddy viscosity coefficient in an Ekman layer model through the adjoint data assimilation	Approach YI Jia-cheng, GAO Yan-qiu, ZHANG Ji-cai(12)82
The application of three statistical models based on MGF to El Niño prediction	WANG Rui-ying, XIAO Tian-gui(12)93
Object-oriented waterline extraction based on Sentinel-2A satellite data, a case study in Rudong	CUI Hong-xing, YANG Hong(12)99
Influence and identification of maritime air masses of coastal cities' atmospheric environment	SHI Hong-qi, WANG Xiao-tong, ZHANG Hao-yang, SHI Bo-xin, ZHANG Rui(12)108

REVIEWS

Analysis of oil-spill monitoring requirements and network observation scheme for event chain	JIN Xi-fang, HUANG Juan, LI Xiao-min, YANG Min, DING Yi(1)165
Investigation of performance evaluation methods in marine oil-spill monitoring networks	WU Geng-kun, LIU Shan-wei, YANG Min, LU Fa-ming, LI Ji-tao(1)172
Coccolithophores and their characteristics	ZHANG Jian, LI Jia-rui, YANG Lu, YUE Na-na(2)158
Effects of abnormal climate and environment on sea cucumber aquaculture industry and its countermeasures	HU Wei, LI Cheng-lin, HAN Sha, ZHAO Bin, XU Tao(2)166
Chitosan-based adsorption materials for removal of heavy metal ions from aqueous solution	TIAN Ye, LIU Ying(2)176
Research on coral reefal geological stability	AN Zhen-zhen, LI Guang-xue, MA Yan-yan, XU Ji-shang, DING Dong, ZHANG Yang, MIN Jian-xiong, WANG Li-yan(3)120
Research overview of submarine pipeline suspension process and protection technology	YANG Shao-peng, SHI Bing(3)130
Research status and prospects of marine microplastics contamination in the Chinese Oceans	WANG Xi-xi, QU Chang-feng, WANG Wen-yu, AN Mei-ling, MIAO Jin-lai(3)141
Study on the distribution of wave energy resources in China and the applicability of wave energy generation device	HU Cong, MAO Hai-ying, YOU Zai-jin, SHI Hong-yuan, GAO Song(3)148
Present situation and prospect of economic cephalopod aquaculture in China	SONG Min-peng, WANG Jin-hai, ZHENG Xiao-dong(3)156
Progress and perspective of microRNA research in marine animals	LIU Xiao-zhuo, ZHANG Xiao-ming, DONG Bo(3)168
Applications of aeolian quartz in provenance tracing and paleoclimatic research	ZHU Xiao, JIANG Fu-qing(4)152
Review on magmatic contribution to seafloor hydrothermal systems	ZHANG Xia, ZHAI Shi-kui, YU Zeng-hui, WANG Shu-jie, CAI Zong-wei(4)161
Progress in the study of red algal floridosides	CUI Xiao-shan, CHEN Juan-juan, YANG Rui, LUO Qi-jun, CHEN Hai-min(4)169
Progress and prospect on the study of physical transportation of marine microplastics	LI Jia, LI Yang-fang, ZHANG Hua(5)162

Influence of tectonic-magmatism on hydrothermal activity: a case study of the Manus Basin	MA Yao, YIN Xue-Bo, WANG Xiao-yuan, CHEN Shuai, ZENG Zhi-gang(5)171
Research on the detecting method of oil spill based on Ultraviolet sensor and SAR of UAV	ZHANG Ting, ZHANG Jie(6)149
Research progress on oceanic seamounts and their eco-environmental characteristics	MA Jun, SONG Jin-ming, LI Xue-gang, LI Ning, WANG Qi-dong(6)160
Research progress on C ₄ carbon fixation pathway of diatoms	LIU Qian, MI Tie-zhu, ZHEN Yu, WANG Hua-long, YU Zhi-gang(7)140
The research progress on the tolerating mechanism for sulfide in <i>Urechis unicinctus</i>	LIU Feng, LI Guang-ya, ZHAO Yu-han, SUN Tao, JI Yuan, YU Hai-rui(7)147
A review on bioluminescent dinoflagellates in the ocean	GUO Shu-jin, SUN Xiao-xia(7)157
Progress and perspective on numerical simulation of hazardous chemicals' drift-diffusion in the sea	CHEN Jun-tian, LI Shu-jiang, SUN Jun-chuan, WANG Xin-yi, LIAN Zhan, WANG Yong-gang(7)166
The characteristics of eco-environment impact of ocean thermal energy conversion	LAN Zhi-gang, LI Xin-zhong, JI Zhong-li, YU Ting, LIU Qiang, LI Da-shu(8)121
The review and outlook of the Island Rule	WANG Xin-yi, SUN Bao-nan, WANG Li-wei, LIAN Zhan(8)130
Review on main pollutants in marine tidal flat, China	HE Pei, ZHANG Ming-ming, LI Qiang, XU Yang, WANG Zhong, LING Jun-fen, HUANG Jin-tian(8)138
Sedimentary characteristics of the Kuroshio origination area and the influence of the Kuroshio intrusion on sediments of the East China Sea	WANG Yue-qi, SONG Jin-ming, YUAN Hua-mao, LI Xue-gang, LI Ning, DUAN Li-qin(9)126
Advances in research on azaspiracids	LÜ Jin-jin, LI Hong-ye, LIU Jie-sheng, YANG Wei-dong(9)134
Progress in research on the marine bacteria SAR86	WANG Dan, WU Dong-mei, LIU Jia-pei, WANG Jian-xin(9)142
Review of research on momentum flux through air-sea interface	FENG Xing-ru, LI Shui-qing, YIN Bao-shu(10)109
A review of Arctic sea ice export	BI Hai-bo, YANG Qing-hua, LIANG Yu, WANG Yun-he, ZHANG Ze-hua, FU Min, HUANG Hai-jun(10)124
Research progress on vanadate visible-light photocatalytic antifouling materials	WANG Yi, JU Peng, ZHANG Dun(10)136
Effects of temperature on the biological metabolism of microbial food web	ZHANG Wu-chang, ZHAO Yuan, DONG Yi, ZHAO Li, LI Hai-bo, XIAO Tian(10)145
<i>Phaeocystis globosa</i> in coastal China: taxonomy, distribution, and its blooms	SHEN Ping-ping, QI Yu-zao, OU Lin-jian(10)162
Advances in DNA barcoding of macrozoobenthos in coastal waters of China	YANG Mei, KOU Qi, LI Xin-zheng(10)173
The characteristics of hydrothermal activities and sulfides in the arc and back-arc basin systems of the Western Pacific	WANG Guo-huai, LI Chuan-shun, DU De-wen, ZHANG Hai-tao(11)109
Temporal and spatial characteristics of harmful algal blooms in South Fujian Golden Delta waters	ZOU Xiao-mei, LIN Guang-fa, CHEN Zhi-biao(11)117
Research status and knowledge mapping analysis of international coral reefs	MA Li-li, YIN Jian-ping, WU Yue-wei, FENG Zhi-gang(11)125
Development situation and trend of world marine fishing industry and its enlightenment to China	SHI Lei, QIN Hong, LIU Long-teng(11)134
Advances and prospects in the research of aquatic collagen for medical applications	WANG Ming-chao, LI Jie, QIN Song, DU Zhen-ning, LI Wen-jun(12)117