

<b>Fourth National Ocean Optics Summit Forum Hangzhou China October 18 - 20 2020</b>	
<b>大会报告</b>	<b>Forum Reports</b>
我国海洋水色卫星遥感应用机遇与挑战	Opportunities and Challenges in the Application of Satellite Ocean Color Sensors in China
探索前行中的深海 LIBS 技术	Exploring the Deep-sea LIBS Technology on the Move
可见光通信挑战与展望	Visible light communication challenges and prospects
天基激光主动探测技术	Space-based Laser Active Detection Technology
典型海洋生态系统智能在线观测网	Intelligent Online Observation Network of Typical Marine Ecosystems
高精度/高光谱/高维海洋生态环境感知及高速水下光无线通信	High-precision/Hyperspectral/High-dimensional Marine Ecological Environment Perception and High-speed Underwater Optical Wireless Communication
<b>分会场</b>	<b>Sub- Forum</b>
<b>01 水体光学特性</b>	<b>01 Study on Optical Properties of Water</b>
复杂混浊水体颗粒的微光机制及其粒径/级遥感研究	Research on the Low Light Mechanism of Complex Turbid Water Particles and Remote Sensing of Its Size/Class
Assessing dissolved organic carbon exchanges across wetland-estuarine-coastal ocean interfaces using medium and high resolution remote sensing satellites	Assessing dissolved organic carbon exchanges across wetland-estuarine-coastal ocean interfaces using medium and high resolution remote sensing satellites
高压低温环境下纯海水散射系数理论计算	Theoretical Calculation of Scattering Coefficient of Pure Seawater at High Pressure and Low Temperature
利用高分辨率遥感卫星监测城市黑臭水体研究进展	Research Progress of Monitoring Urban Black and Odorous Water by High Resolution Remote Sensing Satellite
基于水体颜色参量的大范围长时序湖库水质遥感监测研究	Large-scale and Long-time Water Quality Remote Sensing Monitoring over Lakes Based on Water Color Index

基于 Landsat 影像的珠江口悬浮泥沙时空变化特征研究	Spatiotemporal Variation of Suspended Sediment in the Pearl River Estuary Based on Landsat Images
浮游植物群落/粒级结构的光学探测方法研究	Study on the Optical Detection Method of Phytoplankton Community/Grain Structure
藻类红绿光谱特征及在多种赤潮水体遥感分类中的应用	Red-green Spectrum Characteristics of Algae and Its Application in Remote Sensing Classification of Multiple Red Tide Waters
利用海洋颜色测量估算离水辐照度反射率	Estimation of the Water-leaving Irradiance Reflectance from Measurements of Ocean Color
夜光藻赤潮的遥感觉监测	Monitoring of Noctiluca Red Tide by Remote Sensing
<b>02 水下光学信息探测技术</b>	<b>02 Underwater Optical Information Detection Technology</b>
实用化布里渊散射激光雷达系统	Practical Brillouin Scattering Lidar System
水体参数对 SBS 激光雷达性能的影响	The Influence of Water Parameters on the Performance of SBS Lidar
海洋内波的布里渊激光雷达观测问题	Study on the Observation of Ocean Internal Waves by Brillouin Lidar
星载海洋激光雷达叶绿素剖面探测能力估算	Estimation of Chlorophyll Profile Detection Ability of Spaceborne Oceanographic Lidar
布里渊激光雷达研究进展	Research progress of Brillouin Lidar
高功率窄线宽蓝绿波段金刚石激光	High-power Narrow-linewidth Blue-Green Diamond Laser
<b>02 水下环境参数及目标探测</b>	<b>02 Underwater Environment Parameters and Target Detection</b>
海洋光学成像技术现状和趋势	Current Status and Trends of Ocean Optical Imaging Technology
水下距离选通多模激光成像系统	Multimode Range-gated Underwater Laser Imaging System
水下矢量光视觉定位技术	Underwater Vector Light Visual Positioning Technology
全海深微光彩色成像系统	Deep-sea Low Light Level Color Imaging System

基于智能光学成像的海洋浮游生物原位监测系统	In-situ Monitoring System of Marine Plankton Based on Intelligent Optical Imaging
水下光学传输建模与图像处理	Underwater Optical Transmission Modeling and Image Processing
<b>03 大气与海洋综合遥感</b>	<b>03 Comprehensive Remote Sensing in the Atmosphere and Ocean</b>
星载激光雷达探测海洋碳通量	Detection of Ocean Carbon Flux by Spaceborne Lidar
海洋混合层与海洋大气边界层光学、动力学参数的激光遥感科学问题与关键技术	Scientific Problems and Key Technologies of Laser Remote Sensing of Optical and Dynamic Parameters of Ocean Mixed Layer and Ocean Atmosphere Boundary Layer
星载海洋激光雷达模拟器研究进展	Research Progress of Spaceborne Oceanographic Lidar Simulator
成像大气激光雷达技术及其应用	Imaging Atmospheric Lidar Technology and Its Application
激光雷达海上测风技术进展	Development of Lidar Wind Measurement Technology at Sea
激光雷达遥感黄海水体生物光学特性剖面	Lidar Remote Sensing of Profile of Bio-optical Properties of Yellow Sea
海洋生态环境快速在线监测及遥感地面验证先进技术装备	Advanced Technology and Equipment for Rapid Online Monitoring of Marine Ecological Environment and Remote Sensing Ground Verification
用于海洋上空气溶胶特性研究的高光谱分辨率激光雷达	High-spectral Resolution Lidar for the Study of Aerosol Properties over the Oceans
不规则形状气溶胶粒子激光散射特性	Laser Scattering Characteristics of Irregular Shaped Aerosol Particles
气溶胶粒子谱及微物理参量垂直廓线的激光雷达探测技术	Lidar Detection Technology for Aerosol Particle Spectrum and Vertical Profile of Microphysical Parameters
星载海洋激光雷达信号模拟及多次散射机理研究	Research on Signal Simulation and Multiple Scattering Mechanism of Spaceborne Ocean Lidar
<b>04 海洋生态</b>	<b>04 Marine Ecology</b>

水体反射光谱在 761nm 区间对叶绿素荧光的响应机理研究	Study on the Response Mechanism of Water Reflectance Spectrum to Chlorophyll Fluorescence at 761nm
黄海绿潮时空分布及其对浮游植物生物量的影响	Temporal and Spatial Distribution of Green Tide in the Yellow Sea and Its Influence on Phytoplankton Biomass
基于全反射样品池的海水营养盐原位测量技术	In-situ Measurement Technology of Nutrients in Seawater Based on Total Reflection Sample Pool
基于藻类光合抑制效应的海洋污染生物毒性检测技术	Detection Technology of Marine Pollution Biototoxicity Based on Algae Photosynthetic Inhibition Effect
光谱吸收法海洋生态要素监测技术研究及应用	Research and Application of Monitoring Technology of Marine Ecological Elements by Spectral Absorption Method
荧光高光谱成像技术及其在海洋环境监测中的应用	Fluorescence Hyperspectral Imaging Technology and Its Application in Marine Environmental Monitoring
<b>04 海洋珊瑚礁遥感</b>	<b>04 Marine Coral Reef Remote Sensing</b>
基于时间序列光学遥感影像南沙群岛岛礁地貌遥感制图	Remote Sensing Mapping of the Islands and Reefs of the Nansha Islands Based on Time Series Optical Remote Sensing Images
西沙典型珊瑚礁水下地形、地物一体化遥感反演	Integrated Remote Sensing Retrieval of Underwater Topography and Ground Features of Typical Coral Reef in Xisha Islands
浅水珊瑚礁高新技术精细化监测与应用	High-tech Sophisticated Monitoring and Application of Shallow Coral Reefs
基于高分遥感的珊瑚礁覆盖度遥感监测与白化分析	Remote Sensing Monitoring and Bleaching Analysis of Coral Reef Coverage Based on High Resolution Remote Sensing
多光谱与纹理特征结合的 WorldView-2 影像珊瑚礁海岸线提取方法研究	Research on Coral Reef Coastline Extraction Method from WorldView-2 Image Based on Multi-spectral and Texture Features
黄岩岛环礁地貌对近 40 年气候变暖响应的遥感影像记录	Remote Sensing Image Record of the Response of Atoll Landforms in Huangyan Islands

	to Climate Warming in the Last 40 Years
大洋岛礁（珊瑚礁）光学遥感制图与评估	Optical Remote Sensing Mapping and Assessment of Oceanic Islands and Reefs (Coral Reefs)
基于水下光谱图像的珊瑚识别方法研究	Research on Coral Recognition Method Based on Underwater Spectral Image
<b>05 大气海洋光学特性测量与计算</b>	<b>05 Aerosol Optical Measurement and Calculation in the Atmosphere and Ocean</b>
气溶胶辐射强迫关键变量的观测方法研究	Research on Observation Methods of Key Variables of Aerosol Radiative Forcing
非球形颗粒物光散射矩阵测量与应用	Measurement and Application of Light Scattering Matrix for Non-spherical Particles
大气黑碳单颗粒的分形维数及吸旋旋光性模拟	Fractal Dimension and Optical Absorption Simulation of Single Atmospheric Black Carbon Particles
不变迭代 T 矩阵算法的线性化及其在粒子散射特性计算中的应用	Linearization of Invariant Iterative T-matrix Algorithm and Its Application in the Calculation of Particle Scattering Characteristics
珠江口大襟岛海域水体光学特性以及基于 CASI 的航空高光谱遥感观测	The Optical Properties of the Waters and the Aerial Hyperspectral Remote Sensing Observation Based on CASI in Dajin Island of the Pearl River Estuary
长江口复杂水体的光学特性及其养殖区域识别技术	Optical Characteristics of Complex Water in the Yangtze River Estuary and Its Culture Area Identification Technology
气溶胶光学特性遥感与湍流光学测量新方法	A New Method for Remote Sensing of Aerosol Optical Properties and Optical Measurement of Turbulence
考虑海洋颗粒物后向体积散射形状的遥感反射比模型研究	Research on Remote Sensing Reflectance Model Considering the Backscattering Shape of Marine Particles
基于辐射的云特征反演方法及其受气溶胶影响	Cloud Feature Retrieval Method Based on Radiation and its Influence by Aerosol

定义复现性光梳法海水声速扁平化测量研究	Study on the Flat Sound Velocity of Seawater Measurement by Defined Reproducible Combing Method
云辐射属性参数化及其应用	Cloud Radiation Parameterization and Its Application
L 波段海气耦合矢量辐射传输模型及盐度反演应用	L-band Air-sea Coupled Vector Radiative Transfer Model and Its Application to Salinity Inversion
<b>06 水下光通信技术</b>	<b>06 Underwater Optical Communication Technology</b>
海上舰载激光通信技术发展及试验	Development and Test of Shipboard Laser Communication Technology at Sea
水下激光成像研究进展及应用展望	Research Progress and Application Prospects of Underwater Laser Imaging
水信道对激光传输波前倾斜影响分析	Analysis of Influence of Water Channel on Wavefront Tilt of Laser Transmission
适用于蓝绿光波段无串扰形偏振控制器件的设计	Design of Crosstalk Free Polarization Control Device for Blue-green Spectral Region
水下无线光信道动态特性和长距离通信技术	Dynamic Characteristics of Underwater Wireless Optical Channel and Long-distance Communication Technology
基于蓝绿光的水下通信系统设计的考虑	Design of Underwater Communication System Based on Blue-green Light
激光跨介质的跳时隙水下声通信系统及技术方法	Underwater Acoustic Frequency-hopping Communication System and Its Technical Method
水下无线光网络中的路由技术	Routing Technology in Underwater Wireless Optical Network
水下无线光通信技术的国内外进展	Domestic and Foreign Development of Underwater Wireless Optical Communication Technology
深海长距离自主信息交互研究进展	Research Progress of Deep-sea Long-distance Autonomous Information Interaction
基于海洋湍流的非视线 (NLOS) 水下光通信技术研讨	Research on Non-Line of Sight (NLOS) Underwater Optical Communication Technology Based on Ocean Turbulence

蓝绿激光跨介质通信激光反射源	Reflection Source of Blue-green Cross-medium Communication Laser
面向深海移动平台应用的水下无线光通信大动态接收技术研究	Research on Large Dynamic Receiving Technology of Underwater Wireless Optical Communication for Deep-sea Mobile Platform Application
基于倍率的 532nm 水下无线光通信系统及实验	532nm Underwater Wireless Optical Communication System and Experiment Based on Magnification
<b>07 深海装备研发对光学传感器的需求</b>	<b>07 Demand for Optical Sensors in Deep-sea Equipment Research and Development</b>
光学设备在深海潜水器中的可能应用	Possible Applications of Optical Equipment in Deep-sea Submersibles
水下智能仿生航行器与水下高速长距离通信	Underwater Intelligent Bionic Vehicle and Underwater High-speed and Long-distance Communication
隧洞检测机器人水下多源灯光系统设计与试验验证	Design and Experimental Verification of Underwater Multi-source Lighting System for Tunnel Inspection Robot
针对 AUV 近海底精细探测的水下阵列激光三维扫描系统	Underwater Array Laser 3D Scanning System for AUV Near Seabed Fine Detection
海洋微型颗粒物的偏振光散射与结构特征识别	Characteristics of Ocean Micro Backscattered Polarized Light from Particles Recognition
基于偏振信息的水下超视距成像技术	Underwater Over-the-horizon Imaging Technology Based on Polarization Information
基于激光诱导荧光的深海细菌原位探测	In-situ Detection of Deep-sea Bacteria Based on Laser-induced Fluorescence
海洋鱼类观测中的光学偏振成像增强与修复技术	Optical Polarization Imaging Enhancement and Restoration Technology in Marine Fish Observation
深海拉曼光谱探测技术研发及其科学应用	Research and Development of Deep-sea Raman Spectroscopy Detection Technology and Its Scientific Application
深海原位荧光传感器研究进展	Research Progress of In-situ Deep-sea Fluorescence Sensor

<b>07 新型海洋原位光学遥感器</b>	<b>07 New In-situ Ocean Optical Sensor</b>
抗温漂干扰的光纤探测技术及其海洋应用探索	Optical Fiber Detection Technology Against Temperature Drift and Its Marine Application
基于新型光纤与传感技术的海洋多物理量在线监测研究	Research on Online Monitoring of Marine Multi-Physical Quantities Based on New Optical Fiber and Sensing Technology
基于光电集成技术的海洋传感器	Ocean Sensor Based on Photoelectric Integration Technology
海洋水母暴发监察技术研究	Study on Monitoring Technique of Jellyfish Outbreak in the Ocean
基于原子效应的高灵敏度磁场测量技术	High-sensitivity Magnetic Field Measurement Technology based on Atomic Effect
用于水下传感的纳米光子学光纤传感器	Nanophotonic Optical Fiber Sensor for Underwater Sensing
弱光探测器件与部件研究及其在海洋原位传感器的应用	Research on Low-light Detectors and Components and Their Applications in In-situ Ocean Sensors
海洋光纤 pH 传感器	Ocean Fiber-optic pH Sensor
海洋拉曼/LIBS 光谱传感器技术发展讨论	Discussion on the Development of Marine Raman/LIBS Spectral Sensor Technology
<b>08 海洋水色卫星工程研制及数据应用</b>	<b>08 Ocean Color Satellite Development and Data Application</b>
海洋一号 C/D 星座及其应用	Ocean 1 C/D Constellation and Its Application
我国高轨海洋海岸带监测卫星需求分析与指标体系论证	Demand Analysis and Index System Demonstration of China's High Orbit Satellite for Marine Coastal Zone Monitoring
海洋一号 C/D 卫星成像质量提升与技术保障	Image Quality Improvement and Technical Support of HY-1C/D Satellite
海洋一号卫星同平台交叉定标技术及在轨验证	Cross-calibration Technology and On-orbit Verification of HY-1 Satellite on the Same Platform
海洋卫星紫外成像仪及后续水色遥感发展思考	Reflections on the Development of Marine Satellite Ultraviolet Imager and Subsequent Water Color Remote Sensing



海洋一号 C 卫星多载荷监测海面溢油的能力与应用	Capability and Application of HY-1c Satellite in Multi-load Monitoring of Oil Spilled on Sea Surface
天基主被动复合海洋要素探测技术	Space-based Active and Passive Detection Technology on Composite Ocean Element
我国海洋水色卫星数据处理方法介绍	Introduction of Data Processing Methods of Ocean Color Satellite in China
海洋一号 C/D 卫星水色水温仪全球海面温度反演及其精度评估	Retrieval and Accuracy Evaluation of Global Sea Surface Temperature by HY-1C/D Water Color and Temperature Scanner
海洋一号卫星海岸带成像仪在近海和海岸带环境监测中的应用	Application of HY-1 Satellite Coastal Zone Imager in Offshore and Coastal Zone Environmental Monitoring
海洋一号 C 卫星海岸带成像仪监测内陆湖泊水体环境	Monitoring the Water Environment of Inland Lakes with HY-1C Satellite Coastal Zone Imager
<b>09 高时间分辨率静止轨道水色卫星遥感</b>	<b>09 High Temporal Resolution Remote Sensing with Geostationary Ocean Color Imager</b>
面向海洋与海岸带监测的静止轨道卫星设计与分析	Design and Analysis of Geostationary Satellite for Ocean and Coastal Zone Monitoring
大型漂浮藻遥感识别研究	Research on Remote Sensing Recognition of Large Floating Algae
高轨海洋与海岸带光学遥感系统设计技术	Design Technology of Optical Remote Sensing System for High Orbit Ocean and Coastal Zone
静止轨道水色遥感卫星成像系统偏振特性分析	Analysis of Polarization Characteristics of Imaging System for Remote Sensing with Geostationary Ocean Color Imager
基于 GOCI 影像的水色遥感产品时空变异研究	Research on Spatio-temporal Variation of Water Color Remote Sensing Products Based on GOCI Image

静止卫星晨昏观察与极轨卫星极地观测水色数据大气校正	Atmospheric Correction of Water Color Data from Geostationary Satellite Observation of the Dusk/Dawn and Polar Observation by Polar Orbiting Satellite
人类活动影响下的城市湖泊浊度长短时序变化研究 -- 以武汉市环保与疫情封城政策为例	Study on Time Series Changes of the Turbidity of Urban Lakes Under the Influence of Human Activities – Illustrated by the Case of Wuhan City Policy on Environmental Protection and Lockdown during the Epidemic
适用于海洋和水体探测的成像光谱仪	Imaging Spectrometer for Ocean and Water Detection
<b>09 海洋激光遥感</b>	<b>09 Ocean Laser Remote Sensing</b>
从散射光重构图像的深度学习方法	Image reconstruction from scattered light: a deep learning approach
机载双波长激光海洋剖面探测技术研究	Research on Technology of Airborne Dual-wavelength Laser Detection for Ocean Profile
基于激光雷达的潮间带测绘关键技术	Key Technology of Intertidal Zone Surveying and Mapping Based on Lidar
光子技术激光雷达水深探测关键技术研究	Research on Key Technologies of Photonic Lidar for Water Depth Detection
陆海激光综合探测卫星总体技术研究	Research on the Overall Technology of Land-sea Laser Integrated Detection Satellite
南海次表层浮游植物水华垂直分布的激光遥感	Laser Remote Sensing of Vertical Distribution of Phytoplankton Blooms in the South China Sea
粗糙海气界面的激光传输特性	Laser Transmission Characteristics of Rough Air-sea Interface
<b>09 海洋太阳耀光遥感探索</b>	<b>09 Remote Sensing of Solar Flare over Ocean</b>
基于耀光偏振反射的溢油海面等效折射率反演研究	Inversion of Equivalent Refractive Index of Oil Spilled Sea Surface Based on Polarized Reflection of Flare

海面耀光影响下的哨兵 2 号 MSI 影像的马尾藻自动提取	Automatic Extraction of Sargassum from Sentinel 2 MSI Image under the Influence of Flare on Sea Surface
海面油膜探测的耀光强度统计与应用	Statistics and Application of Flare Intensity for Detection of Oil Film on Sea Surface
漂浮大型藻及其对海表耀光的影响	Floating Macroalgae and Its Effect on the Flare on Sea Surface
海洋多角度太阳耀光遥感及应用	Multi-angle Remote Sensing of Solar Flare over Ocean and Its Application
基于 Dot-Curve 体系的海面耀光纹理特性分析	Texture Analysis of Sea Surface Flare based on Dot-Curve System
<b>10 大气海洋辐射传输模式</b>	<b>10 Radiative Transfer in the Atmosphere and Ocean</b>
全偏振海洋大气耦合辐射传输模式 (ARMS) 研发进展	Research Progress of Fully Polarized Ocean Radiative Transfer Model for Coupled Atmosphere (ARMS)
气象与辐射传输耦合: 辐射场景预测计算模型	Meteorology and Radiation Transmission Coupling: Calculation Model for Prediction of Radiation Scene
红外快速辐射传输模式研制	Development of Infrared Fast Radiation Transfer Mode
一种用于解释水云激光雷达各向异性反射模式极化的多小角散射新框架	A Novel Multiple Small-Angle Scattering Framework for Interpreting Anisotropic Polarization Pattern of Lidar Returns from Water Clouds
高光谱快速辐射传输算法研发	Research and Development of Hyperspectral Fast Radiative Transfer Algorithm
月地距离能否明显影响夜间大气辐射传输计算中的平面平行假设	The Possibility of the Plane Parallel Assumption in Calculation of Atmospheric Radiation Transmission Being Significantly Affected by the Distance Between Moon and Earth
光纤水声探测技术发展和应用	Development and application of optical fiber underwater acoustic detection technology

<b>10 气溶胶和云观测、反演和辐射效应</b>	<b>10 Aerosol and cloud observations, inversion and radiation effects</b>
中国气溶胶关键光学特性及其雾霾天气的联系	Key Optical Properties of Aerosols in China and Their Relationship with Hazy Weather
辐射传输计算中平行分层假设误差分析	Error Analysis of Parallel Layering Hypothesis in Radiative Transfer Calculation
塔克拉玛干沙尘对能量交换的影响	The influence of Taklimakan Dust on Energy Exchange
气溶胶直接辐射效应的不确定性研究	Study on the Uncertainty of Aerosol Direct Radiation Effect
一个基于查找表和地表反射简化算法对中国中东部 18 年间的地表气溶胶直接辐射效应进行快速 计算的方法	A Fast Method for Calculating the Direct Radiative Effects of Surface Aerosols in Central and Eastern China over the Past 18 Years Based on Look-up Table and Simplified Surface Reflection Algorithm
浑浊水体蒙特卡洛辐射传输模拟的一些改进	Improvement of Monte Carlo Simulation of Radiative Transfer in Turbid Water
冰云光学中的不确定性	Uncertainty in Ice Cloud Optics
气溶胶光学特性数据库研发进展	Research Progress of Aerosol Optical Properties Database
基于高分 5/DPC 卫星资料的云相态和云顶压强反算法	Cloud Thermodynamic Phase Detection from Directional polarimetric Camera(DPC) Measurements
粒子的前后向散射相函数峰值对激光雷达回波信号的影响	Influence of the Peak Value of Forward and Backward Scattering Phase Function of Particles on Lidar Echo Signal
基于最优估计理论的海洋气溶胶卫星遥感研究	Research on Ocean Aerosol Satellite Remote Sensing Based on Optimal Estimation Theory( on line)