

December 21, 2018	<a href="#">Gadolinium Doping Enhances the Photoacoustic Signal of Synthetic Melanin Nanoparticles: A Dual Modality Contrast Agent for Stem Cell Imaging</a>	ABSTRACT: In this paper, we show that gadolinium-loaded synthetic melanin nanoparticles (Gd(III)-SMNPs) exhibit up to a 40-fold enhanced photoacoustic
April 30, 2018	<a href="#">Intraoperative Resection Guidance with Photoacoustic and Fluorescence Molecular Imaging Using an Anti-B7-H3 Antibody-Indocyanine Green Dual Contrast Agent</a>	Breast cancer often requires surgical treatment including breast-conserving surgical resection.
January 01, 2018	<a href="#">Real-Time in Vivo Photoacoustic Imaging in the Assessment of Myocardial Dynamics in Murine Model of Myocardial Ischemia</a>	Photoacoustic imaging (PAI) is an evolving real-time imaging modality that combines the higher contrast of optical imaging with the higher spatial res
November 01, 2017	<a href="#">Exploration of melanoma metastases in mice brains using endogenous contrast photoacoustic imaging</a>	Photoacoustic imaging (PAI) provides real time non-invasive and contrast agent free monitoring of some endogenous compounds concentrations that provid
January 01, 2016	<a href="#">Spectroscopic photoacoustic molecular imaging of breast cancer using a B7-H3-targeted ICG contrast agent</a>	Purpose: Breast cancer imaging methods lack diagnostic accuracy, in particular for patients with dense breast tissue, and improved techniques are crit
December 24, 2019	<a href="#">Spectral photoacoustic imaging to estimate in vivo placental oxygenation during preeclampsia</a>	Preeclampsia is a pregnancy-related hypertensive disorder accounting for 14% of global maternal deaths annually.
June 01, 2019	<a href="#">A near-infrared turn-on probe for in vivo chemoselective photoacoustic detection of fluoride ion</a>	The detection of fluoride ion (F <sup>-</sup> ) in living subjects is of value for healthcare and environmental fields.
May 01, 2019	<a href="#">Near-infrared absorbing nanoemulsions as nonlinear ultrasound contrast agents for cancer theranostics</a>	Nanoemulsions serve as promising biomedical agents for cancer therapy and imaging.

April 01, 2019	<a href="#">Lipid Shell Composition Plays a Critical Role in the Stable Size Reduction of Perfluorocarbon Nanodroplets</a>	—Perfluorocarbon nanodroplets (PFCnDs) are phase-change contrast agents that have the potential to enable extravascular contrast-enhanced ultrasound a
April 01, 2019	<a href="#">Insights into photoacoustic speckle and applications in tumor characterization</a>	In ultrasound imaging, fully-developed speckle arises from the spatiotemporal superposition of pressure waves backscattered by randomly distributed sc
March 01, 2019	<a href="#">Polypyrrole-coated phase-change liquid perfluorocarbon nanoparticles for the visualized photothermal-chemotherapy of breast cancer</a>	A theranostic nanoplatform (DTX/PFH@PPy-FA) for multi-modal imaging-guided photothermal- chemotherapy has been constructed.
March 01, 2019	<a href="#">Multifunctional nanoplatform for photoacoustic imaging-guided combined therapy enhanced by CO induced ferroptosis</a>	A multifunctional CO/thermo/chemotherapy nanoplatform is here reported, which is composed of mesoporous carbon nanoparticles (MCN) as near infrared (N
February 01, 2019	<a href="#">Erythrocyte-cancer hybrid membrane-camouflaged melanin nanoparticles for enhancing photothermal therapy efficacy in tumors</a>	Cell membrane coating has emerged as an intriguing biomimetic strategy to endow nanomaterials with functions and properties inherent to source cells f
January 01, 2019	<a href="#">Chlorella-gold nanorods hydrogels generating photosynthesis-derived oxygen and mild heat for the treatment of hypoxic breast cancer</a>	Hypoxic tumors are rarely cured because their low oxygen environment restricts the cytotoxicity of many chemotherapeutics by blocking the production o
January 01, 2019	<a href="#">Ordered assemblies of Fe<sub>3</sub>O<sub>4</sub> and a donor-acceptor-type <math>\pi</math>-conjugated polymer in nanoparticles for enhanced photoacoustic and magnetic effects</a>	We report that the ordered structure in the assemblies of iron oxide nanoparticles in conjugated polymer nanoparticles is the key to achieve better pr

January 01, 2019	<a href="#">Multispectral photoacoustic imaging for the detection of subclinical melanoma</a>	Photoacoustic imaging (PAI) is a noninvasive technique for melanin detection within melanoma metastases.
January 01, 2019	<a href="#">Photoacoustic F-Mode imaging for scale specific contrast in biological systems</a>	In photoacoustic (PA) imaging, time domain reconstruction techniques are the current gold standard for image formation.
January 01, 2019	<a href="#">SDF-1-loaded PLGA nanoparticles for the targeted photoacoustic imaging and photothermal therapy of metastatic lymph nodes in tongue squamous cell carcinoma</a>	The combination of photothermal therapy and targeted chemotherapy can produce much greater cytotoxicity than chemotherapy.
January 01, 2019	<a href="#">Ultrasound Evaluation of Anti-Vascular Endothelial Growth Factor-Induced Changes in Vascular Response Following Tendon Injury</a>	While vascular ingrowth is necessary for tendon healing, hypervascularization following tendon injury is not always believed to be beneficial, and the
January 01, 2019	<a href="#">Erythrocytic bioactivation of nitrite and its potentiation by far-red light</a>	Background: Nitrite is reduced by heme-proteins and molybdenum-containing enzymes to form the important signaling molecule nitric oxide (NO), mediatin
January 01, 2019	<a href="#">Novel small molecular dye-loaded lipid nanoparticles with efficient near-infrared-II absorption for photoacoustic imaging and photothermal therapy of hepatocellular carcinoma</a>	Hepatocellular carcinoma (HCC), is one of the most common cancer worldwide and is very malignant leading to the second most common cause of mortality.
January 01, 2019	<a href="#">pH/NIR-responsive semiconducting polymer nanoparticles for highly effective photoacoustic image guided chemo-photothermal synergistic therapy</a>	ABSTRAC T Multifunctional drug delivery nanoplatform (PDPP3T@PSNiAA NPs) based on NIR absorbing semiconducting polymer nanoparticles for pH/NIR light-
January 01, 2019	<a href="#">Polyethyleneimine-assisted one-pot synthesis of quasi-fractal plasmonic gold nanocompo-sites as a photothermal theranostic agent</a>	Gold nanoparticles have been thoroughly used in designing thermal ablative therapies and photoacoustic imaging for cancer owing to their unique and tu

January 01, 2019	<a href="#">Ultrasound-Responsive Conversion of Microbubbles to Nanoparticles to Enable Background-Free in Vivo Photoacoustic Imaging</a>	Photoacoustic (PA) imaging based on the photon-to-ultrasound conversion allows the imaging of optical absorbers in deep tissues with high spatial reso
January 01, 2019	<a href="#">Photoacoustic imaging of gold nanorods in the brain delivered via microbubble-assisted focused ultrasound: a tool for in vivo molecular neuroimaging</a>	The protective barriers of the CNS present challenges during the treatment and monitoring of diseases.
January 01, 2019	<a href="#">Oil Core–PEG Shell Nanocarriers for In Vivo MRI Imaging</a>	Oil-in-water emulsions represent a promising carrier for in vivo imaging because of the possibility to convey poorly water-soluble species.
January 01, 2019	<a href="#">Oxygenated theranostic nanoplatfoms with intracellular agglomeration behavior for improving the treatment efficacy of hypoxic tumors</a>	Hypoxia plays vital roles in the development of tumor resistance against typical anticancer therapies and local reoxygenation has proved effective to
January 01, 2019	<a href="#">Central action of rapamycin on early ischemic injury and related cardiac depression following experimental subarachnoid hemorrhage</a>	Early brain injury and related cardiac consequences play a key role in the devastating outcomes after subarachnoid hemorrhage (SAH).
December 21, 2018	<a href="#">Ratiometric Photoacoustic Nanoprobe for Bioimaging of Cu<sup>2+</sup></a>	Aberrant copper content implicates numerous diseases including Alzheimer's disease and Wilson's disease.
December 17, 2018	<a href="#">Evaluation of renal oxygen saturation using photoacoustic imaging for the early prediction of chronic renal function in a model of ischemia-induced acute kidney injury</a>	PURPOSE: To evaluate the utility of photoacoustic imaging in measuring changes in renal oxygen saturation after ischemia-induced acute kidney injury,
December 16, 2018	<a href="#">Improving Stem Cell Delivery to the Trabecular Meshwork Using Magnetic Nanoparticles</a>	Glaucoma is a major cause of blindness and is frequently associated with elevated intraocular pressure.

December 15, 2018	<a href="#">A Multimodal Molecular Imaging Study Evaluates Pharmacological Alteration of the Tumor Microenvironment to Improve Radiation Response</a>	Hypoxic zones in solid tumors contribute to radioresistance, and pharmacological agents that increase tumor oxygenation prior to radiation, including
December 14, 2018	<a href="#">Intrinsically absorbing photoacoustic and ultrasound contrast agents for cancer therapy and imaging</a>	Nanoparticles are submicrometer in size and are used in a variety of ways in the biomedical field.
December 12, 2018	<a href="#">Chemodrug-Gated Biodegradable Hollow Mesoporous Organosilica Nanotheranostics for Multimodal Imaging-Guided Low-Temperature Photothermal Therapy/Chemotherapy of Cancer</a>	Noninvasive physical treatment with relatively low intensity stimulation and the development of highly efficient anticancer medical strategy are still
December 01, 2018	<a href="#">Photoacoustic imaging for monitoring periodontal health: A first human study</a>	The gold-standard periodontal probe is an aging tool that can detect periodontitis and monitor gingival health but is highly error-prone, does not ful
November 24, 2018	<a href="#">Indocyanine Green labeling for optical and photoacoustic imaging of Mesenchymal Stem Cells after in vivo transplantation</a>	The transplantation of Mesenchymal Stem Cells (MSCs) holds great promise for the treatment of a plethora of human diseases, but new non-invasive proce
October 17, 2018	<a href="#">In vivo photoacoustic difference-spectra imaging of bacteria using photoswitchable chromoproteins</a>	Photoacoustic (PA) imaging offers great promise for deep molecular imaging of optical reporters but has difficulties in imaging multiple molecular pro
October 10, 2018	<a href="#">Self-Supplied Tumor Oxygenation through Separated Liposomal Delivery of H<sub>2</sub>O<sub>2</sub> and Catalase for Enhanced Radio-Immunotherapy of Cancer</a>	The recent years have witnessed the blooming of cancer immunotherapy, as well as their combinational use together with other existing cancer treatment

September 01, 2018	<a href="#">Laser-activated perfluorocarbon nanodroplets: a new tool for blood brain barrier opening</a>	A major obstacle in the monitoring and treatment of neurological diseases is the blood brain barrier (BBB), a semipermeable barrier that prevents the
September 01, 2018	<a href="#">Biomimetic O<sub>2</sub>-Evolving metal-organic framework nanoplatform for highly efficient photodynamic therapy against hypoxic tumor</a>	Improving the supply of O <sub>2</sub> and the circulation lifetime of photosensitizers for photodynamic therapy (PDT) in vivo would be a promising approach to el
September 01, 2018	<a href="#">Alternating block copolymer-based nanoparticles as tools to modulate the loading of multiple chemotherapeutics and imaging probes</a>	Cancer therapy often relies on the combined action of different molecules to overcome drug resistance and enhance patient outcome.
July 01, 2018	<a href="#">Study of Long-Term Biocompatibility and Bio-Safety of Implantable Nanogenerators</a>	Implantable nanogenerator (i-NG) has shown great promises for enabling self-powered implantable medical devices (IMDs).
May 14, 2018	<a href="#">A Gold/Silver Hybrid Nanoparticle for Treatment and Photoacoustic Imaging of Bacterial Infection</a>	Ag <sup>+</sup> ions are a well-known antibacterial agent, and Ag nanoparticles act as a reservoir of these Ag <sup>+</sup> ions for targeted therapy of bacterial infections.
May 11, 2018	<a href="#">Impact of Age on Disease Progression and Microenvironment in Oral Cancer</a>	Despite the recognized link between aging and cancer, most preclinical studies in experimental tumor models are conducted with 6- to 8-wk-old rodents.
April 20, 2018	<a href="#">Magnetic resonance and photoacoustic imaging of brain tumor mediated by mesenchymal stem cell labeled with multifunctional nanoparticle introduced via carotid artery injection</a>	OBJECTIVE: To evaluate the feasibility of visualizing bone marrow-derived human mesenchymal stem cells (MSCs) labeled with a gold-coated magnetic reso



April 06, 2018	<a href="#">Radiotherapy-Sensitized Tumor Photothermal Ablation Using <math>\gamma</math>-Polyglutamic Acid Nanogels Loaded with Polypyrrole</a>	Development of versatile nanoscale platforms for cancer diagnosis and therapy is of great importance for applications in translational medicine.
April 02, 2018	<a href="#">Dual-modal photoacoustic and magnetic resonance tracking of tendon stem cells with PLGA/iron oxide microparticles in vitro</a>	Reliable cell tracking is essential to understand the fate of stem cells following implantation, and thus promote the clinical application of stem cell
April 01, 2018	<a href="#">The combined therapeutic effects of iodine 131-labeled multifunctional copper sulfide-loaded microspheres in treating breast cancer</a>	Compared to conventional cancer treatment, combination therapy based on well-designed nanoscale platforms may offer an opportunity to eliminate tumors
April 01, 2018	<a href="#">A Yolk-Shell Nanoplatfrom for Gene-Silencing-Enhanced Photolytic Ablation of Cancer</a>	Noninvasive near-infrared (NIR) light responsive therapy is a promising cancer treatment modality; however, some inherent drawbacks of conventional ph
March 01, 2018	<a href="#">Deep Tumor Penetrating Bioparticulates Inspired Burst Intracellular Drug Release for Precision Chemo-Phototherapy</a>	The relevance of personalized medicine has inspired research for individually concerted diagnosis and therapy.
February 12, 2018	<a href="#">In vitro photoacoustic spectroscopy of pulsatile blood flow: probing the interrelationship between red blood cell aggregation and oxygen saturation</a>	Assessments of the appropriateness and inappropriateness of behaviors may influence conflict, cohesion, and goal attainment in multinational organizat
February 01, 2018	<a href="#">Biomimetic Copper Sulfide for Chemo-Radiotherapy: Enhanced Uptake and Reduced Efflux of Nanoparticles for Tumor Cells under Ionizing Radiation</a>	Combined chemo-radiotherapy is one of most widely applied treatments for clinical cancer therapy.

January 31, 2018	<a href="#">Design of Phase-Changeable and Injectable Alginate Hydrogel for Imaging-Guided Tumor Hyperthermia and Chemotherapy</a>	The objective of the present study was to construct an alginate (AG)-based phase-changeable and injectable hydrogel for imaging-guided tumor hyperther
January 22, 2018	<a href="#">Preclinical Ultrasound-Guided Photoacoustic Imaging of the Placenta in Normal and Pathologic Pregnancy</a>	Placental oxygenation varies throughout pregnancy.
January 01, 2018	<a href="#">Molecular imaging of tumor photoimmunotherapy: Evidence of photosensitized tumor necrosis and hemodynamic changes</a>	Near-infrared photoimmunotherapy (NIR PIT) employs the photoabsorbing dye IR700 conjugated to antibodies specific for cell surface epidermal growth fa
January 01, 2018	<a href="#">A laser-activated multifunctional targeted nanoagent for imaging and gene therapy in a mouse xenograft model with retinoblastoma Y79 cells</a>	Retinoblastoma (RB) is the most common intraocular malignancy of childhood that urgently needs early detection and effective therapy methods.
January 01, 2018	<a href="#">Dichroism-sensitive photoacoustic computed tomography</a>	Photoacoustic computed tomography (PACT), a fast-developing modality for deep tissue imaging, images the spatial distribution of optical absorption.
January 01, 2018	<a href="#">Nuclear factor 90 promotes angiogenesis by regulating HIF-1<math>\alpha</math>/VEGF-A expression through the PI3K/Akt signaling pathway in human cervical cancer article</a>	© 2018 The Author(s).
January 01, 2018	<a href="#">A catalase-loaded hierarchical zeolite as an implantable nanocapsule for ultrasound-guided oxygen self-sufficient photodynamic therapy against pancreatic cancer</a>	Photodynamic therapy (PDT) is an alternative strategy for treating pancreatic cancer (PC) in clinics.
January 01, 2018	<a href="#">Design of injectable agar-based composite hydrogel for multi-mode tumor therapy</a>	We designed an injectable hydrogel by dissolving MoS <sub>2</sub> /Bi <sub>2</sub> S <sub>3</sub> -PEG (MBP), doxorubicin (DOX) and agar into water for the concurrent tumor photothermal and



January 01, 2018	<a href="#">Preoperative measurement of cutaneous melanoma and nevi thickness with photoacoustic imaging</a>	Photoacoustic imaging (PAI) is an emerging biomedical imaging technology, which can potentially be used in the clinic to preoperatively measure melano
January 01, 2018	<a href="#">An Easy-to-Fabricate Clearable CuS-Superstructure-Based Multifunctional Theranostic Platform for Efficient Imaging Guided Chemo-Photothermal Therapy</a>	Despite drug delivery systems (DDSs) have been receiving ever-increasing attention, development of a simple, effective, sensitive and clearable drug d
January 01, 2018	<a href="#">Improved photoacoustic-based oxygen saturation estimation with SNR-regularized local fluence correction</a>	As photoacoustic (PA) imaging makes its way into the clinic, accuracy of PA-based metrics becomes increasingly important.
January 01, 2018	<a href="#">Multi-layered tumor-targeting photothermal-doxorubicin releasing nanotubes eradicate tumors in vivo with negligible systemic toxicity</a>	Multi-layered single-walled carbon nanotubes, termed SWNT@BSA@Au-S-PEG-FA@DOX, which integrate photothermal therapy with small molecule drug delivery,
January 01, 2018	<a href="#">Au-PLGA Hybrid Nanoparticles with Catalase-Mimicking and near-Infrared Photothermal Activities for Photoacoustic Imaging-Guided Cancer Therapy</a>	© 2018 American Chemical Society. Imaging-guided diagnosis and therapy has been highlighted in the area of nanomedicines.
January 01, 2018	<a href="#">One-pot synthesis of pH-responsive charge-switchable PEGylated nanoscale coordination polymers for improved cancer therapy</a>	Nanoscale coordination polymers (NCPs) are promising nanomedicine platforms featured with biodegradability and versatile functionalities.
January 01, 2018	<a href="#">Synthesis of Hollow Biomineralized CaCO<sub>3</sub>-Polydopamine Nanoparticles for Multimodal Imaging-Guided Cancer Photodynamic Therapy with Reduced Skin Photosensitivity</a>	The development of activatable nanoplatfoms to simultaneously improve diagnostic and therapeutic performances while reducing side effects is highly a

January 01, 2018	<a href="#">Wulff in a cage gold nanoparticles as contrast agents for computed tomography and photoacoustic imaging</a>	A core–shell nanostructure yields balanced contrast production for both CT and photoacoustics.
January 01, 2018	<a href="#">Multispectral Photoacoustic Imaging of Tumor Protease Activity with a Gold Nanocage-Based Activatable Probe</a>	Tumor proteases have been recognized as significant regulators in the tumor microenvironment, but the current strategies for in vivo protease imaging
January 01, 2018	<a href="#">Switchable Photoacoustic Intensity of Methylene Blue via Sodium Dodecyl Sulfate Micellization</a>	The interaction between methylene blue (MB) and sodium dodecyl sulfate (SDS) has been widely studied spectroscopically, but details about their intera
January 01, 2018	<a href="#">Facile fabrication of highly photothermal-effective albumin-assisted gold nanoclusters for treating breast cancer</a>	Gold nanoclusters (AuNCs) have been considered to be a promising candidate for hyperthermia-based anticancer therapy.
January 01, 2018	<a href="#">Small PLGA nanocapsules Co-encapsulating copper sulfide nanodots and fluorocarbon compound for photoacoustic imaging-guided HIFU synergistic therapy</a>	A nanometer-sized inorganic/organic hybrid enhancement agent is constructed for photoacoustic imaging-guided high intensity focused ultrasound therap
January 01, 2018	<a href="#">Photoacoustic imaging of synovial tissue hypoxia in experimental post-traumatic osteoarthritis.</a>	OBJECTIVES: This pilot study aimed to investigate the feasibility of non-invasively assessing synovial tissue hypoxia in vivo using photoacoustic (PA)
January 01, 2018	<a href="#">Biodegradable Hollow Mesoporous Organosilica Nanotheranostics for Mild Hyperthermia-Induced Bubble-Enhanced Oxygen-Sensitized Radiotherapy</a>	Alleviation of tumor hypoxia has been the premise for improving the effectiveness of radiotherapy, which hinges upon the advanced delivery and rapid r

January 01, 2018	<a href="#">Photoacoustic Oxygenation Quantification in Patients with Raynaud's: First-in-Human Results</a>	The purpose of this study was to investigate the use of photoacoustic imaging for quantifying fingertip oxygenation as an approach to diagnosing and m
January 01, 2018	<a href="#">Mesopore-Induced Aggregation of Cobalt Protoporphyrin for Photoacoustic Imaging and Antioxidant Protection of Stem Cells</a>	With the ever-accelerating development of functional materials design and fabrication, various nanomaterial-based molecular imaging platforms with imp
January 01, 2018	<a href="#">Photoacoustic imaging of tumour vascular permeability with indocyanine green in a mouse model</a>	Background: We analysed the haemodynamics of indocyanine green (ICG) in mouse organs and tumours and evaluated responses to anti-angiogenic agents in
January 01, 2018	<a href="#">Octopod PtCu Nanoframe for Dual-Modal Imaging-Guided Synergistic Photothermal Radiotherapy</a>	Heavy atom nanoparticles have high X-ray absorption capacity and near infrared (NIR) photothermal conversion efficiency, which could be used as radio-
January 01, 2018	<a href="#">Highly Crystalline Multicolor Carbon Nanodots for Dual-Modal Imaging-Guided Photothermal Therapy of Glioma</a>	Imaging-guided site-specific photothermal therapy (PTT) of glioma and other tumors in central nervous system presents a great challenge for the curren
January 01, 2018	<a href="#">Visualizing the effects of metformin on tumor growth, vascularity, and metabolism in head and neck cancer</a>	© 2018 John Wiley & Sons A/S.
January 01, 2018	<a href="#">Biomimetic nanoparticles delivered hedgehog pathway inhibitor to modify tumour microenvironment and improved chemotherapy for pancreatic carcinoma</a>	© 2018 Informa UK Limited, trading as Taylor & Francis Group The unique tumour microenvironment (TM) of pancreatic ductal adenocarcinoma (PDA) includi

January 01, 2018	<a href="#">Degradable rhenium trioxide nanocubes with high localized surface plasmon resonance absorbance like gold for photothermal theranostics</a>	The applications of inorganic theranostic agents in clinical trials are generally limited to their innate non-biodegradability and potential long-term
January 01, 2018	<a href="#">Generation of multiparametric MRI maps by using Gd-labelled- RBCs reveals phenotypes and stages of murine prostate cancer</a>	Prostate Cancer (PCa) is the second most common and fifth cause of cancer-related mortality in males in Western Countries.
January 01, 2018	<a href="#">Photoacoustic Imaging for Noninvasive Periodontal Probing Depth Measurements</a>	The periodontal probe is the gold standard tool for periodontal examinations, including probing depth measurements, but is limited by systematic and r
January 01, 2018	<a href="#">Photoacoustic Imaging as an Early Biomarker of Radio Therapeutic Efficacy in Head and Neck Cancer</a>	The negative impact of tumor hypoxia on radiotherapeutic efficacy is well recognized.
January 01, 2018	<a href="#">Copper sulfide nanoparticles as a photothermal switch for TRPV1 signaling to attenuate atherosclerosis</a>	Atherosclerosis is characterized by the accumulation of lipids within the arterial wall.
January 01, 2018	<a href="#">Prevascularization of dermal substitutes with adipose tissue-derived microvascular fragments enhances early skin grafting</a>	Split-thickness skin grafts (STSG) are still the gold standard for the treatment of most skin defects.
January 01, 2018	<a href="#">Sensitization of Hypoxic Tumors to Radiation Therapy Using Ultrasound-Sensitive Oxygen Microbubbles</a>	Purpose: Much of the volume of solid tumors typically exists in a chronically hypoxic microenvironment that has been shown to result in both chemother
January 01, 2018	<a href="#">Bacteria-like mesoporous silica-coated gold nanorods for positron emission tomography and photoacoustic imaging-guided chemo-photothermal combined therapy</a>	Mesoporous silica nanoshell (MSN) coating has been demonstrated as a versatile surface modification strategy for various kinds of inorganic functional

January 01, 2018	<a href="#">Development and evaluation of a CEACAM6-targeting theranostic nanomedicine for photoacoustic-based diagnosis and chemotherapy of metastatic cancer</a>	Metastasis is the leading cause of cancer-related deaths.
January 01, 2018	<a href="#">Perfluorooctyl bromide &amp; indocyanine green co-loaded nanoliposomes for enhanced multimodal imaging-guided phototherapy</a>	As a highly biocompatible NIR dye, indocyanine green (ICG) has been widely explored for cancer treatment due to its various energy level transition pa
January 01, 2018	<a href="#">[ASAP] Gadolinium Metallofullerene-Polypyrrole Nanoparticles for Activatable Dual-Modal Imaging-Guided Photothermal Therapy</a>	Accurate diagnosis of tumor is promising to guide photothermal therapy (PTT) for efficacious tumor ablation with minimal damage to healthy tissues.
January 01, 2018	<a href="#">Selective cancer treatment via photodynamic sensitization of hypoxia-responsive drug delivery</a>	The precise and selective delivery of chemodrugs into tumors represents a critical requirement for anti-cancer therapy.
January 01, 2018	<a href="#">2D Ultrathin MXene-Based Drug-Delivery Nanoplatfor for Synergistic Photothermal Ablation and Chemotherapy of Cancer</a>	Two-dimensional (2D) MXenes, as a new 2D functional material nanosystem, have been extensively explored for broad applications.
January 01, 2018	<a href="#">Development of Citrate-Based Dual-Imaging Enabled Biodegradable Electroactive Polymers</a>	Increasing occurrences of degenerative diseases, defective tissues, and severe cancers heighten the importance of advanced biomedical treat-ments, wh
January 01, 2018	<a href="#">Photoacoustic imaging of integrin-overexpressing tumors using a novel ICG-based contrast agent in mice</a>	PhotoAcoustic Imaging (PAI) is a biomedical imaging modality currently under evaluation in preclinical and clinical settings.
December 01, 2017	<a href="#">Photoacoustic imaging for in vivo quantification of placental oxygenation in mice</a>	Accurate analysis of placental and fetal oxygenation is critical during pregnancy.

July 01, 2017	<a href="#">Drug "Pent-Up" in Hollow Magnetic Prussian Blue Nanoparticles for NIR-Induced Chemothermal Tumor Therapy with Trimodal Imaging</a>	The study reports a biocompatible smart drug delivery system based on a doxorubicin (DOX) blending phase-change material of 1-pentadecanol loaded hollow
June 27, 2017	<a href="#">Fibrin-Targeted and H<sub>2</sub>O<sub>2</sub>-Responsive Nanoparticles as a Theranostics for Thrombosed Vessels</a>	A thrombus (blood clot) is formed in injured vessels to maintain the integrity of vasculature.
June 01, 2017	<a href="#">Lanthanide-integrated supramolecular polymeric nanoassembly with multiple regulation characteristics for multidrug-resistant cancer therapy</a>	Cancer treatment can in principle be enhanced by the synergistic effects of chemo- and nucleic acid-based combination therapies but the lack of efficiency
May 31, 2017	<a href="#">Marriage of Albumin–Gadolinium Complexes and MoS<sub>2</sub> Nanoflakes as Cancer Theranostics for Dual-Modality Magnetic Resonance/Photoacoustic Imaging and Photothermal Therapy</a>	The construction of safe and stable theranostics is beneficial to realize simultaneous cancer diagnosis and treatment.
May 01, 2017	<a href="#">Orthogonal near-infrared upconversion co-regulated site-specific O<sub>2</sub> delivery and photodynamic therapy for hypoxia tumor by using red blood cell microcarriers</a>	Pre-existing hypoxia in tumors can result in an inadequate oxygen supply during photodynamic therapy (PDT), which in turn hampers photodynamic efficacy
April 01, 2017	<a href="#">In vivo photoacoustics and high frequency ultrasound imaging of mechanical high intensity focused ultrasound (HIFU) ablation</a>	The thermal effect of high intensity focused ultrasound (HIFU) has been clinically exploited over a decade, while the mechanical HIFU is still largely
March 24, 2017	<a href="#">Phase-Transition Nanodroplets for Real-Time Photoacoustic/Ultrasound Dual-Modality Imaging and Photothermal Therapy of Sentinel Lymph Node in Breast Cancer</a>	Pathological status of lymph nodes (LNs) plays a critical role in staging and treatment for the patients with breast cancer.
March 01, 2017	<a href="#">NH<sub>4</sub>HCO<sub>3</sub> gas-generating liposomal nanoparticle for photoacoustic imaging in breast cancer</a>	In this study, we have developed a biodegradable nanomaterial for photoacoustic imaging (PAI).



March 01, 2017	<a href="#">Photoacoustic signal characterization of cancer treatment response: Correlation with changes in tumor oxygenation</a>	Frequency analysis of the photoacoustic radiofrequency signals and oxygen saturation estimates were used to monitor the in-vivo response of a novel, t
February 01, 2017	<a href="#">Ultrasound-guided spectral photoacoustic imaging of hemoglobin oxygenation during development</a>	Few technologies are capable of imaging in vivo function during development.
January 24, 2017	<a href="#">Theranostic Liposomes with Hypoxia-Activated Prodrug to Effectively Destruct Hypoxic Tumors Post-Photodynamic Therapy</a>	Photodynamic therapy (PDT), a noninvasive cancer therapeutic method triggered by light, would lead to severe tumor hypoxia after treatment.
January 20, 2017	<a href="#">Core-shell and co-doped nanoscale metal-organic particles (NMOPs) obtained via post-synthesis cation exchange for multimodal imaging and synergistic thermo-radiotherapy</a>	Nanoscale metal-organic particles (NMOPs) have recently shown great promise in the area of nanomedicine owing to their tunable compositions, highly en
January 12, 2017	<a href="#">Real-Time Monitoring of Placental Oxygenation during Maternal Hypoxia and Hyperoxygenation Using Photoacoustic Imaging</a>	PURPOSE: This preclinical study aimed to evaluate placental oxygenation in pregnant rats by real-time photoacoustic (PA) imaging on different days of
January 01, 2016	<a href="#">Rational Design of Branched Nanoporous Gold Nanoshells with Enhanced Physico-Optical Properties for Optical Imaging and Cancer Therapy</a>	Reported procedures on the synthesis of gold nanoshells with smooth surfaces have merely demonstrated efficient control of shell thickness and particl
January 01, 2016	<a href="#">Phase Transition Nanoparticles as Multimodality Contrast Agents for the Detection of Thrombi and for Targeting Thrombolysis: In Vitro and in Vivo Experiments</a>	Thrombotic disease is extremely harmful to human health, and early detection and treatment can improve the prognosis and reduce mortality.
January 01, 2016	<a href="#">Self-assembly of semiconducting-plasmonic gold nanoparticles with enhanced optical property for photoacoustic imaging and photothermal therapy</a>	Although various noble metal and semiconducting molecules have been developed as photoacoustic (PA) agents, the use of semiconducting polymer-metal na

January 01, 2016	<a href="#">Photoacoustic-Guided Surgery with Indocyanine Green-Coated Superparamagnetic Iron Oxide Nanoparticle Clusters</a>	A common cause of local tumor recurrence in brain tumor surgery results from incomplete surgical resection.
January 01, 2016	<a href="#">Copper Sulfide Perfluorocarbon Nanodroplets as Clinically Relevant Photoacoustic/Ultrasound Imaging Agents</a>	We have developed laser-activated perfluorocarbon nanodroplets containing copper sulfide nanoparticles (CuS NPs) for contrast-enhanced ultrasound and
January 01, 2016	<a href="#">Ultra-small Iron-Gallic Acid Coordination Polymer Nanoparticles for Chelator-free Labeling of <sup>64</sup>Cu and Multimodal Imaging-guided Photothermal Therapy</a>	Cancer nanotechnology has become the hot topic nowadays.
January 01, 2016	<a href="#">Photoacoustic imaging of lymphatic pumping</a>	The lymphatic system is crucial for maintaining fluid balance in tissues and for immune cell trafficking; however, there are only a few methods for im
January 01, 2016	<a href="#">What is new in nanoparticle-based photoacoustic imaging?</a>	Photoacoustic imaging combines the high temporal and spatial resolution of ultrasound with the good contrast and spectral tuning of optical imaging.
January 01, 2016	<a href="#">Enhanced photothermal therapy of biomimetic polypyrrole nanoparticles through improving blood flow perfusion</a>	In this study, we reported a strategy to improve delivery efficiency of a long-circulation biomimetic photothermal nanoagent for enhanced photothermal
January 01, 2016	<a href="#">Hemispherical photoacoustic imaging of myocardial infarction: in vivo detection and monitoring</a>	Objectives: This study aimed to demonstrate the capacity for noninvasive localisation and characterisation of myocardial infarction (MI) in vivo using
January 01, 2016	<a href="#">Two-Dimensional Tantalum Carbide (MXenes) Composite Nanosheets for Multiple Imaging-Guided Photothermal Tumor Ablation</a>	MXenes, an emerging family of graphene- analogues two-dimensional (2D) materials, have attracted continuous and tremendous attention in many applicati

January 01, 2016	<a href="#">Oxygenation Status in Chronic Leg Ulcer After Topical Hemoglobin Application May Act as a Surrogate Marker to Find the Best Treatment Strategy and to Avoid Ineffective Conservative Long-term Therapy</a>	Purpose: Chronic leg ulcers can be a challenge to treat and long-term therapy a significant cost factor in western public health budgets.
January 01, 2016	<a href="#">Albumin-Templated Manganese Dioxide Nanoparticles for Enhanced Radioisotope Therapy</a>	Although nanoparticle-based drug delivery systems have been widely explored for tumor-targeted delivery of radioisotope therapy (RIT), the hypoxia zon
January 01, 2016	<a href="#">Chelator-Free and Biocompatible Melanin Nanoplatform with Facile-Loading Gadolinium and Copper-64 for Bioimaging</a>	Development of a chelator-free and biocompatible platform for the facile construction of gadolinium <sup>3+</sup> (Gd <sup>3+</sup> )- loaded nanoparticle based probes for in
January 01, 2016	<a href="#">A Theranostic Nanoplatform: Triple-Model Imaging Guided Synergistic Cancer Therapy Based on Liposomes Conjugated Mesoporous Silica Nanoparticles</a>	Mesoporous silica nanoparticles (MSNs) have long since been investigated to provide a versatile drug-delivery platform due to their multitudinous meri
January 01, 2016	<a href="#">Energy-Absorbing and Local Plasmonic Nanodiamond/Gold Nanocomposites for Sustained and Enhanced Photoacoustic Imaging</a>	Photoacoustic (PA) imaging is a laser-mediated optical ultrasound-based visualization that allows imaging of optical energy absorbers in deep tissue,
January 01, 2016	<a href="#">Spatiotemporal Optoacoustic Mapping of Tumor Hemodynamics in a Clinically Relevant Orthotopic Rabbit Model of Head and Neck Cancer</a>	The purpose of this study was to investigate the usefulness of photoacoustic imaging (PAI) for spatiotemporal mapping of tumor hemodynamics in a rabbi
January 01, 2016	<a href="#">A triple-synergistic strategy for combinational photo/radiotherapy and multi-modality imaging based on hyaluronic acid-hybridized polyaniline-coated WS 2 nanodots</a>	In this study, we report a strategy for integrating hyaluronic acid (HA), polyaniline (PANI), WS <sub>2</sub> nanodots (WS <sub>2</sub> ), and chlorin e <sub>6</sub> (Ce <sub>6</sub> ) into a single n

January 01, 2016	<a href="#">Molecularly Engineered Theranostic Nanoparticles for Thrombosed Vessels: H2O2-Activatable Contrast-Enhanced Photoacoustic Imaging and Antithrombotic Therapy</a>	A thrombus (blood clot), composed mainly of activated platelets and fibrin, obstructs arteries or veins, leading to various life-threatening diseases.
January 01, 2016	<a href="#">Image Monitoring of the Impaired Phagocytic Activity of Kupffer Cells and Liver Oxygen Saturation in a Mouse Cholangitis Model Using Contrast-Enhanced Ultrasound Imaging and Photoacoustic Imaging</a>	Bile duct ligation (BDL) can cause cholangitis, which is known to induce impaired Kupffer cell (KC) function and increased oxygen consumption in a mou
January 01, 2016	<a href="#">High-intensity focused ultrasound-triggered nanoscale bubble-generating liposomes for efficient and safe tumor ablation under photoacoustic imaging monitoring</a>	High-intensity focused ultrasound (HIFU) is widely applied to tumors in clinical practice due to its minimally invasive approach.
January 01, 2016	<a href="#">Tumor vasculature normalization by orally fed erlotinib to modulate the tumor microenvironment for enhanced cancer nanomedicine and immunotherapy</a>	The abnormal tumor vasculature is one of key reasons that lead to the limited tumor perfusion as well as hypoxic and immunosuppressive tumor microenvi
January 01, 2016	<a href="#">Proteoglycan-targeting applied to hypoxia-activated prodrug therapy in chondrosarcoma: first proof-of-concept</a>	Due to its abundant chondrogenic matrix and hypoxic tissue, chondrosarcoma is chemo- and radio-resistant.
January 01, 2016	<a href="#">Red blood cell membrane-camouflaged melanin nanoparticles for enhanced photothermal therapy</a>	Photothermal therapy (PTT) has represented a promising noninvasive approach for cancer treatment in recent years.
January 01, 2016	<a href="#">Highly versatile SPION encapsulated PLGA nanoparticles as photothermal ablaters of cancer cells and as multimodal imaging agents</a>	We have designed versatile polymeric nanoparticles with cancer cell specific targeting capabilities via aptamer conjugation after the successful encap

January 01, 2016	<a href="#">Black hollow silicon oxide nanoparticles as highly efficient photothermal agents in the second near-infrared window for in vivo cancer therapy</a>	Semiconductor nanoparticles with localized surface plasmon resonance (LSPR) have gained increasing interest due to their potential for use in nanomedicine
January 01, 2016	<a href="#">Photoacoustic Imaging of Embryonic Stem Cell-Derived Cardiomyocytes in Living Hearts with Ultrasensitive Semiconducting Polymer Nanoparticles</a>	Human embryonic stem cell-derived cardiomyocytes (hESC-CMs) have become promising tools to repair injured hearts.
January 01, 2016	<a href="#">Reactive Oxygen Species (ROS)-Responsive Nanomedicine for RNAi Cancer Therapy</a>	Although much effort has been dedicated to the development of efficient siRNA delivery for cancer therapy, delivery nanomaterials that can particularly
January 01, 2016	<a href="#">Non-invasive monitoring of the therapeutic response in sorafenib-treated hepatocellular carcinoma based on photoacoustic imaging</a>	PURPOSE: We investigated the changes of tissue oxygen saturation (sO <sub>2</sub> ) in sorafenib-treated HCC (hepatocellular carcinoma) mouse models using photoacoustic
January 01, 2016	<a href="#">CuS-Based Theranostic Micelles for NIR-Controlled Combination Chemotherapy and Photothermal Therapy and Photoacoustic Imaging</a>	Cancer remains a major threat to human health due to low therapeutic efficacies of currently available cancer treatment options.
January 01, 2016	<a href="#">Visualizing Changes in Cdkn1c Expression Links Early-Life Adversity to Imprint Misregulation in Adults</a>	Imprinted genes are regulated according to parental origin and can influence embryonic growth and metabolism and confer disease susceptibility.
January 01, 2016	<a href="#">Engineered Zn(II)-dipicolylamine-gold nanorod provides effective prostate cancer treatment by combining siRNA delivery and photothermal therapy</a>	Combination cancer treatment has emerged as a critical approach to achieve remarkable anticancer effect.
January 01, 2016	<a href="#">Polyaniline-loaded <math>\gamma</math>-polyglutamic acid nanogels as a platform for photoacoustic imaging-guided tumor photothermal therapy</a>	We report the facile synthesis of polyaniline (PANI)-loaded $\gamma$ -polyglutamic acid ( $\gamma$ -PGA) nanogels (NGs) for photoacoustic (PA) imaging-guided photothermal

January 01, 2016	<a href="#">Seeding density is a crucial determinant for the in vivo vascularisation capacity of adipose tissue-derived microvascular fragments</a>	© 2017, AO Research Institute. All rights reserved.
January 01, 2016	<a href="#">Limiting the protein corona: A successful strategy for in vivo active targeting of anti-HER2 nanobody-functionalized nanostars</a>	Gold nanoparticles hold great promise as anti-cancer theranostic agents against cancer by actively targeting the tumor cells.
January 01, 2016	<a href="#">Bottom-up synthesis of WS 2 nanosheets with synchronous surface modification for imaging guided tumor regression</a>	Two-dimensional transition metal dichalcogenides (TMDs) have been receiving great attention as NIR photothermal transducing agent in tumor phototherma
January 01, 2016	<a href="#">BSA-Bioinspired Gadolinium Hybrid-Functionalized Hollow Gold Nanoshells for NIRF/PA/CT/MR Quadmodal Diagnostic Imaging-Guided Photothermal/Photodynamic Cancer Therapy</a>	Multimodal imaging guided synergistic therapy promises more accurate diagnosis and higher therapeutic efficiency than single imaging modality or their
January 01, 2016	<a href="#">Photoacoustic Imaging of Human Mesenchymal Stem Cells Labeled with Prussian Blue–Poly(L-lysine) Nanocomplexes</a>	Acoustic imaging is affordable and accessible without ionizing radiation.
January 01, 2016	<a href="#">Propofol (2,6-diisopropylphenol) is an applicable immersion anesthetic in the axolotl with potential uses in hemodynamic and neurophysiological experiments</a>	The Mexican axolotl ( <i>Ambystoma mexicanum</i> ) is an important model species in regenerative biology.
January 01, 2016	<a href="#">Optical clearing and fluorescence deep-tissue imaging for 3D quantitative analysis of the brain tumor microenvironment</a>	© 2017 The Author(s) Background: Three-dimensional visualization of the brain vasculature and its interactions with surrounding cells may shed light o
January 01, 2016	<a href="#">Can photoacoustic imaging quantify surface-localized J-aggregating nanoparticles?</a>	We investigate the feasibility of photoacoustic (PA) imaging to quantify the concentration of surface-localized nanoparticles, using tissue-mimicking



January 01, 2016	<a href="#">A feasibility study of photoacoustic imaging of ex vivo endoscopic mucosal resection tissues from Barrett's esophagus patients</a>	Background and study aims Accurate endoscopic detection of dysplasia in patients with Barrett's esophagus (BE) remains a major clinical challenge.
November 11, 2016	<a href="#">Photoacoustic Imaging for the Detection of Hypoxia in the Rat Femoral Artery and Skeletal Muscle Microcirculation</a>	Photoacoustic (PA) imaging is an emerging technology that combines structural and functional imaging of tissues using laser and ultrasound energy.
October 12, 2016	<a href="#">Ultrasound Triggered Tumor Oxygenation with Oxygen-Shuttle Nanoperfluorocarbon to Overcome Hypoxia-Associated Resistance in Cancer Therapies</a>	Tumor hypoxia is known to be one of critical reasons that limit the efficacy of cancer therapies, particularly photodynamic therapy (PDT) and radiothe
September 01, 2016	<a href="#">Tunable, biodegradable gold nanoparticles as contrast agents for computed tomography and photoacoustic imaging</a>	Gold nanoparticles (AuNP) have been proposed for many applications in medicine.
August 17, 2016	<a href="#">A Multimodal Imaging Approach for Longitudinal Evaluation of Bladder Tumor Development in an Orthotopic Murine Model</a>	Bladder cancer is the fourth most common malignancy amongst men in Western industrial- ized countries with an initial response rate of 70% for the non
August 01, 2016	<a href="#">Multifunctional polyelectrolyte microcapsules as a contrast agent for photoacoustic imaging in blood</a>	The polyelectrolyte microcapsules that can be accurate either visualized in biological media or in tissue would en- hance their further in vivo applic
August 01, 2016	<a href="#">Photoacoustic Imaging in Oncology: Translational Preclinical and Early Clinical Experience</a>	Photoacoustic imaging has evolved into a clinically translatable platform with the potential to complement existing imaging techniques for the managem

August 01, 2016	<a href="#">Functional Flow Patterns and Static Blood Pooling in Tumors Revealed by Combined Contrast-Enhanced Ultrasound and Photoacoustic Imaging</a>	Alterations in tumor perfusion and microenvironment have been shown to be associated with aggressive cancer phenotypes, raising the need for noninvasi
July 28, 2016	<a href="#">Contrast agents for molecular photoacoustic imaging</a>	Photoacoustic imaging (PAI) is an emerging tool that bridges the traditional depth limits of ballistic optical imaging and the resolution limits of di
July 01, 2016	<a href="#">Simultaneous assessment of red blood cell aggregation and oxygen saturation under pulsatile flow using high-frequency photoacoustics</a>	In the present paper, the optical wavelength dependence on the photoacoustic (PA) assessment of the pulsatile blood flow was investigated by means of
June 29, 2016	<a href="#">Graphene Meets Microbubbles: A Superior Contrast Agent for Photoacoustic Imaging</a>	Coupling graphene with a soft polymer surface offers the possibility to build hybrid constructs with new electrical, optical, and mechanical propertie
June 20, 2016	<a href="#">Preclinical efficacy of bevacizumab with CRLX101, an investigational nanoparticle-drug conjugate, in treatment of metastatic triple-negative breast cancer</a>	VEGF-pathway targeting antiangiogenic drugs, such as bevacizumab, when combined with chemotherapy have changed clinical practice for the treatment of
June 15, 2016	<a href="#">Narrow Absorption NIR Wavelength Organic Nanoparticles Enable Multiplexed Photoacoustic Imaging</a>	Photoacoustic (PA) imaging is an emerging hybrid optical-ultrasound based imaging technique that can be used to visualize optical absorbers in deep t
June 08, 2016	<a href="#">Gold Nanoparticle Coated Carbon Nanotube Ring with Enhanced Raman Scattering and Photothermal Conversion Property for Theranostic Applications</a>	We report a new type of carbon nanotube ring (CNTR) coated with gold nanoparticles (CNTR@AuNPs) using CNTR as a template and surface attached redox-ac

June 06, 2016	<a href="#">Photoacoustic imaging of angiogenesis in a subcutaneous islet transplant site in a murine model</a>	Islet transplantation (IT) is an established clinical therapy for select patients with type-1 diabetes.
April 12, 2016	<a href="#">High Resolution Ultrasound and Photoacoustic Imaging of Orthotopic Lung Cancer in Mice: New Perspectives for Onco-Pharmacology</a>	Objectives: We have developed a relevant preclinical model associated with a specific imaging protocol dedicated to onco-pharmacology studies in mice.
March 01, 2016	<a href="#">Cuffing-based photoacoustic flowmetry in humans in the optical diffusive regime</a>	Measuring blood flow speed in the optical diffusive regime in humans has been a long standing challenge for photoacoustic tomography.
February 01, 2016	<a href="#">Monitoring Prostate Tumor Growth in an Orthotopic Mouse Model Using Three-Dimensional Ultrasound Imaging Technique</a>	Prostate cancer (CaP) is the most commonly diagnosed and the second leading cause of death from cancer in males in USA.
January 01, 2015	<a href="#">Multimodal near-infrared-emitting PluS Silica nanoparticles with fluorescent , photoacoustic , and photothermal capabilities</a>	Purpose: The aim of the present study was to develop nanoprobe with theranostic features, including – at the same time – photoacoustic, near-infrared
January 01, 2015	<a href="#">Photoacoustic imaging of real-time oxygen changes in chronic leg ulcers after topical application of a haemoglobin spray: a pilot study</a>	Objective: To use a non-invasive measurement of oxygen saturation in chronic leg ulcers after the application of a topical haemoglobin spray to invest
January 01, 2015	<a href="#">Porphyrin Nanodroplets: Sub-micrometer Ultrasound and Photoacoustic Contrast Imaging Agents</a>	Ultrasound offers significant potential as a molecular imaging modality when imaging microbubble agents owing to single-bubble sensitivity.
January 01, 2015	<a href="#">Stable J-aggregation enabled dual photoacoustic and fluorescence nanoparticles for intraoperative cancer imaging</a>	J-aggregates display nanoscale optical properties which enable their use in fluorescence and photoacoustic imaging applications.

January 01, 2015	<a href="#">Accelerated Blood Clearance Phenomenon Reduces the Passive Targeting of PEGylated Nanoparticles in Peripheral Arterial Disease</a>	Peripheral arterial disease (PAD) is a leading global health concern.
January 01, 2015	<a href="#">Multi-Wavelength Photoacoustic Visualization of High Intensity Focused Ultrasound Lesions</a>	High intensity focused ultrasound (HIFU) thermal therapies are limited by deficiencies in existing image-guidance techniques.
January 01, 2015	<a href="#">Dual-enhanced photothermal conversion properties of reduced graphene oxide-coated gold superparticles for light-triggered acoustic and thermal theranostics</a>	A rational design of highly efficient photothermal agents that possess excellent light-to-heat conversion properties is a fascinating topic in nanotechnology.
January 01, 2015	<a href="#">Ultrasound-guided photoacoustic imaging for the selective detection of EGFR-expressing breast cancer and lymph node metastases</a>	We assessed the use of ultrasound (US)-guided photoacoustic imaging (PAI) and anti-EGFR antibody-conjugated gold nanorods (anti-EGFR-GNs) to non-invasively detect EGFR-expressing breast cancer and lymph node metastases.
January 01, 2015	<a href="#">Plasmonic fluorescent CdSe/Cu<sub>2</sub>S hybrid nanocrystals for multichannel imaging and cancer directed photo-thermal therapy</a>	A simple, crude Jatropha curcas (JC) oil-based synthesis approach, devoid of any toxic phosphine and pyrophoric ligands, to produce size and shape tunable plasmonic fluorescent CdSe/Cu <sub>2</sub> S hybrid nanocrystals for multichannel imaging and cancer directed photo-thermal therapy.
January 01, 2015	<a href="#">Photoacoustic monitoring of tumor and normal tissue response to radiation</a>	Hypoxia is a recognized characteristic of tumors that influences efficacy of radiotherapy (RT).
January 01, 2015	<a href="#">Quantitative photoacoustic elastography in humans</a>	We report quantitative photoacoustic elastography (QPAE) capable of measuring Young's modulus of biological tissue in vivo in humans.
January 01, 2015	<a href="#">Re-assessing the enhanced permeability and retention effect in peripheral arterial disease using radiolabeled long circulating nanoparticles</a>	Abstract As peripheral arterial disease (PAD) results in muscle ischemia and neovascularization, it has been claimed that nanoparticles can passively target the ischemic area.

January 01, 2015	<a href="#">Chlorosome-Inspired Synthesis of Templated Metallochlorin-Lipid Nanoassemblies for Biomedical Applications</a>	Chlorosomes are vesicular light-harvesting organelles found in photosynthetic green sulfur bacteria.
January 01, 2015	<a href="#">Long circulating reduced graphene oxide-iron oxide nanoparticles for efficient tumor targeting and multimodality imaging</a>	Polyethylene glycol (PEG) surface modification is one of the most widely used approaches to improve the solubility of inorganic nanoparticles, prevent
January 01, 2015	<a href="#">Multifunctional Fe<sub>3</sub>O<sub>4</sub> @ Au core/shell nanostars: a unique platform for multimode imaging and photothermal therapy of tumors</a>	We herein report the development of multifunctional folic acid (FA)-targeted Fe <sub>3</sub> O <sub>4</sub> @ Au nanostars (NSs) for targeted multi-mode magnetic resonance (MR
December 21, 2015	<a href="#">Folding Up of Gold Nanoparticle Strings into Plasmonic Vesicles for Enhanced Photoacoustic Imaging</a>	The stepwise self-assembly of hollow plasmonic vesicles with vesicular membranes containing strings of gold nanoparticles (NPs) is reported.
November 01, 2015	<a href="#">Handheld photoacoustic probe to detect both melanoma depth and volume at high speed in vivo</a>	In the United States, Black infants have significantly worse birth outcomes than White infants.
November 01, 2015	<a href="#">Label-free Detection of Lymph Node Metastases with US-guided Functional Photoacoustic Imaging</a>	Summary: Photoacoustic imaging imparts the ability to distinguish materials according to their differences in optical absorption (ie, their color) w
October 27, 2015	<a href="#">Tumor-Specific Formation of Enzyme-Instructed Supramolecular Self-Assemblies as Cancer Theranostics</a>	Despite the effort of developing various nanodelivery systems, most of them suffer from undesired high uptakes by the reticuloendothelial system, such
October 21, 2015	<a href="#">Validating tyrosinase homologue melA as a photoacoustic reporter gene for imaging Escherichia coli</a>	To understand the pathogenic processes for infectious bacteria, appropriate research tools are required for replicating and characterizing infections.

September 22, 2015	<a href="#">Sequential Drug Release and Enhanced Photothermal and Photoacoustic Effect of Hybrid Reduced Graphene Oxide-Loaded Ultrasmall Gold Nanorod Vesicles for Cancer Therapy</a>	We report a hybrid reduced graphene oxide (rGO)-loaded ultrasmall plasmonic gold nanorod vesicle (rGO-AuNRVe) (~65 nm in size) with remarkably amplifi
September 01, 2015	<a href="#">Photoacoustic imaging of salivary glands</a>	In this work, we utilized photoacoustic imaging (PAI) with co-registered ultrasound (US) to non-invasively assess salivary gland function in vivo.
August 12, 2015	<a href="#">In vivo photoacoustic flowmetry at depths of the diffusive regime based on saline injection</a>	We propose a saline injection-based method to quantify blood flow velocity in vivo with acoustic-resolution photoacoustic tomography.
July 01, 2015	<a href="#">Prophylactic Edaravone Prevents Transient Hypoxic-Ischemic Brain Injury</a>	Background and Purpose—Hypoperfusion-induced thrombosis is an important mechanism for postsurgery stroke and cognitive decline, but there are no per
June 23, 2015	<a href="#">Determination of biodistribution of ultrasmall, near-infrared emitting gold nanoparticles by photoacoustic and fluorescence imaging</a>	This study compares fluorescence and photoacoustic (PA) imaging of ex vivo tumors and organs from tumor-bearing mice injected intravenously with ultra
June 01, 2015	<a href="#">Combined Ultrasound and Photoacoustic Imaging to Noninvasively Assess Burn Injury and Selectively Monitor a Regenerative Tissue-Engineered Construct</a>	Current biomedical imaging tools have limitations in accurate assessment of the severity of open and deep burn wounds involving excess bleeding and se
May 01, 2015	<a href="#">Parts per billion detection of uranium with a porphyrinoid-containing nanoparticle and in vivo photoacoustic imaging</a>	In the United States, Black infants have significantly worse birth outcomes than White infants.



April 01, 2015	<a href="#">Photoacoustic Imaging of Vascular Hemodynamics: Validation with Blood Oxygenation Level-Dependent MR Imaging</a>	Purpose To noninvasively assess vascular hemodynamics with photoacoustic imaging (PAI) and blood oxygenation level-dependent (BOLD) magnetic resonance
March 30, 2015	<a href="#">In situ conversion of porphyrin microbubbles to nanoparticles for multimodality imaging</a>	Converting nanoparticles or monomeric compounds into larger supramolecular structures by endogenous <sup>1,2</sup> or external <sup>3,4</sup> stimuli is increasingly popular
March 17, 2015	<a href="#">2H,3H-Decafluoropentane-Based Nanodroplets: New Perspectives for Oxygen Delivery to Hypoxic Cutaneous Tissues</a>	Perfluoropentane (PFP)-based oxygen-loaded nanobubbles (OLNBs) were previously proposed as adjuvant therapeutic tools for pathologies of different e
January 01, 2015	<a href="#">Protein-based photothermal theranostics for imaging-guided cancer therapy</a>	The development of imageable photothermal theranostics has attracted considerable attention for imaging guided photothermal therapy (PTT) with high tu
January 01, 2015	<a href="#">Prediction of Tumor Recurrence and Therapy Monitoring Using Ultrasound-Guided Photoacoustic Imaging</a>	Selection and design of individualized treatments remains a key goal in cancer therapeutics; prediction of response and tumor recurrence following a g
January 01, 2015	<a href="#">Multi-stimuli responsive Cu<sub>2</sub>S nanocrystals as trimodal imaging and synergistic chemophotothermal therapy agents</a>	A size and shape tuned, multifunctional metal chalcogenide, Cu <sub>2</sub> S-based nanotheranostic agent is developed for trimodal imaging and multimodal therap
January 01, 2015	<a href="#">Phototheranostic Porphyrin Nanoparticles Enable Visualization and Targeted Treatment of Head and Neck Cancer in Clinically Relevant Models</a>	Head and neck cancer is the fifth most common type of cancer worldwide and remains challenging for effective treatment due to the proximity to critica

January 01, 2015	<a href="#">Nanoparticle Probes for Structural and Functional Photoacoustic Molecular Tomography</a>	Nowadays, nanoparticle probes have received extensive attention largely due to its potential biomedical applications in structural, functional, and mo
January 01, 2015	<a href="#">Comparison of Photoacoustically Derived Hemoglobin and Oxygenation Measurements with Contrast-Enhanced Ultrasound Estimated Vascularity and Immunohistochemical Staining in a Breast Cancer Model</a>	In this preliminary study, we compared two noninvasive techniques for imaging intratumoral physiological conditions to immunohistochemical staining in
January 01, 2015	<a href="#">Gold nanoparticles for photoacoustic imaging.</a>	Photoacoustic (PA) imaging is a biomedical imaging modality that provides functional information regarding the cellular and molecular signatures of ti
January 01, 2015	<a href="#">Design of hybrid MnO<sub>2</sub>-polymer-lipid nanoparticles with tunable oxygen generation rates and tumor accumulation for cancer treatment</a>	Manganese dioxide (MnO <sub>2</sub> ) nanoparticles (NPs) were discovered in previous work to be effective in improving tumor oxygenation (hypoxia) and reducing
December 23, 2014	<a href="#">Linear-array-based photoacoustic imaging of human microcirculation with a range of high frequency transducer probes</a>	Photoacoustic imaging (PAI) with a linear-array-based probe can provide a convenient means of im- aging the human microcirculation within its native s
November 07, 2014	<a href="#">Photoacoustic Tomography of Human Hepatic Malignancies Using Intraoperative Indocyanine Green Fluorescence Imaging</a>	Recently, fluorescence imaging following the preoperative intravenous injection of indocyanine green has been used in clinical settings to identify he
October 29, 2014	<a href="#">Transferring Biomarker into Molecular Probe: Melanin Nanoparticle as a Naturally Active Platform for Multimodality Imaging</a>	Developing multifunctional and easily prepared nanoplatforms with integrated different modalities is highly challenging for molecular imaging.

October 01, 2014	<a href="#">Dye-Loaded Ferritin Nanocages for Multimodal Imaging and Photothermal Therapy</a>	Multimodal imaging-guided photothermal therapy (PTT), for the therapy of cancer, based on a ferritin (FRT) nanocage loaded with the near-infrared dye
October 01, 2014	<a href="#">Sentinel Lymph Node Biopsy Revisited: Ultrasound-Guided Photoacoustic Detection of Micrometastases Using Molecularly Targeted Plasmonic Nanosensors</a>	Metastases rather than primary tumors are responsible for killing most patients with cancer.
September 10, 2014	<a href="#">A dual gold nanoparticle system for mesenchymal stem cell tracking</a>	Stem cell-based therapies have demonstrated improved outcomes in preclinical and clinical trials for treating cardiovascular ischemic diseases.
September 01, 2014	<a href="#">Cellulose nanoparticles are a biodegradable photoacoustic contrast agent for use in living mice</a>	Molecular imaging with photoacoustic ultrasound is an emerging field that combines the spatial and temporal resolution of ultrasound with the contrast
August 26, 2014	<a href="#">Stimuli-Responsive Photoacoustic Nanoswitch for in Vivo Sensing Applications</a>	Photoacoustic imaging provides high-resolution images at depths beyond the optical diffusion limit.
July 06, 2014	<a href="#">Non-invasive multimodal functional imaging of the intestine with frozen micellar naphthalocyanines</a>	There is a need for safer and improved methods for non-invasive imaging of the gastrointestinal tract.
June 17, 2014	<a href="#">Multi-wavelength photoacoustic imaging of inducible tyrosinase reporter gene expression in xenograft tumors</a>	Photoacoustic imaging is an emerging hybrid imaging technology capable of breaking through resolution limits of pure optical imaging technologies impo
June 01, 2014	<a href="#">Contrast-enhanced magneto-photo-acoustic imaging in vivo using dual-contrast nanoparticles</a>	By mapping the distribution of targeted plasmonic nanoparticles (NPs), photoacoustic (PA) imaging offers the potential to detect the pathologies in th

May 01, 2014	<a href="#">Multimodal Ultrasound-Photoacoustic Imaging of Tissue Engineering Scaffolds and Blood Oxygen Saturation In and Around the Scaffolds</a>	Preclinical, noninvasive imaging of tissue engineering polymeric scaffold structure and/or the physiological processes such as blood oxygenation remain
April 22, 2014	<a href="#">Multifunctional Albumin-MnO<sub>2</sub> Nanoparticles Modulate Solid Tumor Microenvironment by Attenuating Hypoxia, Acidosis, Vascular Endothelial Growth Factor and Enhance Radiation Response</a>	Insufficient oxygenation (hypoxia), acidic pH (acidosis), and elevated levels of reactive oxygen species (ROS), such as H <sub>2</sub> O <sub>2</sub> , are characteristic abnormalities
April 16, 2014	<a href="#">Aggregate Enhanced Trimodal Porphyrin Shell Microbubbles for Ultrasound, Photoacoustic, and Fluorescence Imaging</a>	Microbubbles (MBs) are currently used as ultrasound (US) contrast agents and as delivery vehicles for site-specific US-triggered drug and gene delivery
March 01, 2014	<a href="#">Ultrasound-guided photoacoustic imaging: current state and future development</a>	Photoacoustic imaging, frequently coregistered with ultrasonic imaging, can provide functional and cellular/molecular information about tissue within
January 28, 2014	<a href="#">Indocyanine Green-Loaded Photoacoustic Nanodroplets: Dual Contrast Nanoconstructs for Enhanced Photoacoustic and Ultrasound Imaging</a>	Recently, perfluorocarbon (PFC) nanodroplets were introduced as contrast agents for imaging and image-guided therapy.
January 26, 2014	<a href="#">Semiconducting polymer nanoparticles as photoacoustic molecular imaging probes in living mice</a>	Photoacoustic (PA) imaging holds great promise for the visualization of physiology and pathology at the molecular level with deep tissue penetration
January 01, 2014	<a href="#">Active curcumin nanoparticles formed from a volatile microemulsion template</a>	Mitochondria targeted phototherapy, including photodynamic therapy (PDT) and photothermal therapy (PTT), has excelled as an effective approach among others

January 01, 2014	<a href="#">Real-Time Assessment of Tissue Hypoxia In Vivo with Combined Photoacoustics and High-Frequency Ultrasound</a>	In preclinical cancer studies, non-invasive functional imaging has become an important tool to assess tumor development and therapeutic effects.
January 01, 2014	<a href="#">Dual In Vivo Photoacoustic and Fluorescence Imaging of Assessment , and Surgical Guidance</a>	Biomarker-specific imaging probes offer ways to improve molecular diagnosis, intraoperative margin assessment, and tumor resection.
January 01, 2014	<a href="#">In vitro photoacoustic visualization of myocardial ablation lesions</a>	Background—Radiofrequency (RF) ablation to treat atrial arrhythmia is limited by an inability to reliably assess lesion durability and transmuralty.
January 01, 2014	<a href="#">Detection of Melanoma Metastases in Resected Human Lymph Nodes by Noninvasive Multispectral Photoacoustic Imaging</a>	Objective .
January 01, 2014	<a href="#">Multiparametric Spectroscopic Photoacoustic Imaging of Breast Cancer Development in a Transgenic Mouse Model</a>	OBJECTIVE: To evaluate the potential of multiparametric spectroscopic photoacoustic imaging using oxygen saturation, total hemoglobin, and lipid conte
December 26, 2013	<a href="#">Imaging of an Inflammatory Injury in the Newborn Rat Brain with Photoacoustic Tomography</a>	BACKGROUND: The precise assessment of cerebral saturation changes during an inflammatory injury in the developing brain, such as seen in periventricul
November 15, 2013	<a href="#">Silica-coated gold nanoplates as stable photoacoustic contrast agents for sentinel lymph n[1] G. P. Luke, A. Bashyam, K. a Homan, S. Makhija, Y.-S. Chen, and S. Y. Emelianov, “Silica-coated gold nanoplates as stable photoacoustic contrast agents for senti</a>	A biopsy of the first lymph node to which a tumor drains-the sentinel lymph node (SLN)-is commonly performed to identify micrometastases.

November 01, 2013	<a href="#">In vitro and in vivo mapping of drug release after laser ablation thermal therapy with doxorubicin-loaded hollow gold nanoshells using fluorescence and photoacoustic imaging</a>	Doxorubicin-loaded hollow nanoshells (Dox@PEG-HAuNS) increases the efficacy of photothermal ablation (PTA) by not only mediating efficient PTA but als
November 01, 2013	<a href="#">Development and optimization of near-IR contrast agents for immune cell tracking</a>	Gold nanorods (NRs) are attractive for in vivo imaging due to their high optical cross-sections and tunable absorbance.
October 31, 2013	<a href="#">Non-invasive Monitoring of Ultrasound-Stimulated Microbubble Radiation Enhancement Using Photoacoustic Imaging</a>	Modulation of the tumour microvasculature has been demonstrated to affect the effectiveness of radiation, stimulating the search for anti-angiogenic a
September 25, 2013	<a href="#">Development and Application of Stable Phantoms for the Evaluation of Photoacoustic Imaging Instruments</a>	Photoacoustic imaging combines the high contrast of optical imaging with the spatial resolution and penetration depth of ultrasound.
July 01, 2013	<a href="#">Photoacoustic imaging of the bladder: a pilot study.</a>	Photoacoustic imaging is a promising new technology that combines tissue optical characteristics with ultrasound transmission and can potentially visu
May 07, 2013	<a href="#">Modulation of photoacoustic signal generation from metallic surfaces</a>	The ability to image metallic implants is important for medical applications ranging from diagnosis to therapy.
May 01, 2013	<a href="#">Optical wavelength selection for improved spectroscopic photoacoustic imaging</a>	Spectroscopic photoacoustic imaging has the potential to become a powerful tool that can estimate distributions of optically absorbing chromophores in
May 01, 2013	<a href="#">Development and initial application of a fully integrated photoacoustic micro-ultrasound system</a>	Photoacoustic (PA) imaging for biomedical applications has been under development for many years.



March 15, 2013	<a href="#">Molecular Photoacoustic Imaging of Follicular Thyroid Carcinoma</a>	PURPOSE: To evaluate the potential of targeted photoacoustic imaging as a noninvasive method for detection of follicular thyroid carcinoma.
March 14, 2013	<a href="#">A Spinal Cord Window Chamber Model for In Vivo Longitudinal Multimodal Optical and Acoustic Imaging in a Murine Model</a>	In vivo and direct imaging of the murine spinal cord and its vasculature using multimodal (optical and acoustic) imaging techniques could significantly
January 01, 2013	<a href="#">Bio-ink properties and printability for extrusion printing living cells</a>	Angiogenesis is a common pathological characteristic of many solid tumors and vulnerable atherosclerotic plaques.
January 01, 2013	<a href="#">VEGF-loaded graphene oxide as theranostics for multi-modality imaging-monitored targeting therapeutic angiogenesis of ischemic muscle</a>	Herein we report the design and synthesis of multifunctional VEGF-loaded IR800-conjugated graphene oxide (GO-IR800-VEGF) for multi-modality imaging-mo
January 01, 2013	<a href="#">Tyrosinase as a multifunctional reporter gene for Photoacoustic/MRI/PET triple modality molecular imaging.</a>	Development of reporter genes for multimodality molecular imaging is highly important.
January 01, 2013	<a href="#">A versatile method for the preparation of polyacrylamide derivative functionalized thermo-responsive gold nanoparticles</a>	Abstract: Herein we report the synthesis of a resilient nanosystem based on silica-coated magnetic MnFe <sub>2</sub> O <sub>3</sub> nanoparticles conjugated to fluorescein and
November 27, 2012	<a href="#">Gold nanorods for ovarian cancer detection with photoacoustic imaging and resection guidance via Raman imaging in living mice.</a>	Improved imaging approaches are needed for ovarian cancer screening, diagnosis, staging, and resection guidance.
October 01, 2012	<a href="#">Photoacoustic Imaging for Medical Diagnostics</a>	
July 11, 2012	<a href="#">A Facile, One-Step Nanocarbon Functionalization for Biomedical Applications</a>	Despite their immense potential in biomedicine, carbon nanomaterials suffer from inefficient dispersion and biological activity in vivo.

May 16, 2012	<a href="#">In vivo Ultrasound and Photoacoustic Monitoring of Mesenchymal Stem Cells Labeled with Gold Nanotracers</a>	Longitudinal monitoring of cells is required in order to understand the role of delivered stem cells in therapeutic neovascularization.
February 09, 2012	<a href="#">Photoacoustic characterization of radiofrequency ablation lesions</a>	Radiofrequency ablation (RFA) procedures are used to destroy abnormal electrical pathways in the heart that can cause cardiac arrhythmias.
February 03, 2012	<a href="#">Biomedical Applications of Photoacoustic Imaging with Exogenous Contrast Agents</a>	Photoacoustic imaging is a biomedical imaging modality that provides functional information, and, with the help of exogenous contrast agents, cellular
January 10, 2012	<a href="#">Biomedical photoacoustics beyond thermal expansion using triggered nanodroplet vaporization for contrast-enhanced imaging</a>	Since being discovered by Alexander Bell, photoacoustics may again be seeing major resurgence in biomedical imaging.
January 01, 2011	<a href="#">Photoacoustic Imaging of Mesenchymal Stem Cells in Living Mice via Silica-Coated Gold Nanorods</a>	Improved imaging modalities are critically needed for optimizing stem cell therapy.
January 01, 2011	<a href="#">VCAM-1-targeting gold nanoshell probe for photoacoustic imaging of atherosclerotic plaque in mice</a>	The development of molecular probes and novel imaging modalities, allowing better resolution and specificity, is associated with an increased potentia
January 01, 2010	<a href="#">Development and Validation of a Combined Photoacoustic Micro- Ultrasound System for In Vivo Oxygen Saturation Estimation</a>	Photoacoustic (PA) Imaging can estimate the spatial distribution of oxygen saturation (sO <sub>2</sub> ) and total hemoglobin concentration (HbT) in blood, and be