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| January 18, 2021   | <a href="#">Morphological, functional, and molecular assessment of breast cancer bone metastases by experimental ultrasound techniques compared with magnetic resonance imaging and histological analysis</a> | Background: The imaging of bone metastases, which is regularly performed by cross-sectional modalities, is clinically vital when characterizing and st |
| October 19, 2020   | <a href="#">Contrast-Enhanced Multispectral Photoacoustic Imaging for Irregular Hepatectomy Navigation: A Pilot Study</a>   | Irregular hepatectomy plays a prominent role in the treatment of small hepatocellular carcinoma (HCC) patients with severe cirrhosis and localized liv |
| October 16, 2020   | <a href="#">Clinically-applicable perfluorocarbon-loaded nanoparticles for in vivo photoacoustic, 19f magnetic resonance and fluorescent imaging</a>  | Photoacoustic imaging (PAI) is an emerging biomedical imaging technique that is now coming to the clinic.  |
| September 09, 2020 | <a href="#">Tetrazine-Derived Near-Infrared Dye as a Facile Reagent for Developing Targeted Photoacoustic Imaging Agents</a>  | A new photoacoustic (PA) dye was developed as a simple-to-use reagent for creating targeted PA imaging agents.   |
| May 18, 2020       | <a href="#">Silicon carbide nanoparticles as a photoacoustic and photoluminescent dual-imaging contrast agent for long-term cell tracking</a>   | Silicon carbide nanoparticles are capable of long-term tracking of mesenchymal stem cells through both photoluminescence and photoacoustic imaging.    |
| March 30, 2020     | <a href="#">Noninvasive monitoring of liver metastasis development via combined multispectral photoacoustic imaging and fluorescence diffuse optical tomography</a>   | Rationale: In vivo molecular imaging in preclinical animal models is a tool of choice for understanding the pathophysiological mechanisms involved in  |
| January 01, 2020   | <a href="#">Surface-anchored framework for generating RhD-epitope stealth red blood cells</a>   | Rhesus D (RhD) is one of the most important immunogenic antigens on red blood cells (RBCs).  |
| January 01, 2019   | <a href="#">Indocyanine Green J Aggregates in Polymersomes for Near-Infrared Photoacoustic Imaging</a>  | Clinical translation of photoacoustic imaging (PAI) has been limited by the lack of near-infrared (NIR) contrast agents with low toxicity required for |
| 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, 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 |
| June 09, 2021      | <a href="#">Construction of Smart Nanotheranostic Platform Bi-Ag@PVP: Multimodal CT/PA Imaging-Guided PDT/PTT for Cancer Therapy</a>  | High-efficiency nanotheranostic agents with multimodal imaging guidance have attracted considerable interest in the field of cancer therapy.           |
| June 09, 2021      | <a href="#">Tuning band gap of MnO2 nanoflowers by Alkali metal doping for enhanced Ferroptosis/phototherapy synergism in Cancer</a>  | Due to the complexity and heterogeneity of tumors, the therapeutic effectiveness of monomodal phototherapy is still limited.                           |
| June 09, 2021      | <a href="#">A metal protoporphyrin-induced nano-self-assembly for potentiating photothermal therapy by depleting antioxidant defense systems</a>  | Nanomaterial-mediated low-temperature photothermal therapy (PTT) by integrating photothermal agent and heat shock proteins (HSPs) inhibitor holds grea |
| June 07, 2021      | <a href="#">Gold Nanorod-Melanin Hybrids for Enhanced and Prolonged Photoacoustic Imaging in the Near-Infrared-II Window</a>  | Photoacoustic (PA) imaging holds great promise as a noninvasive imaging modality.  |
| June 04, 2021      | <a href="#">Oxygen and oxaliplatin-loaded nanoparticles combined with photo-sonodynamic inducing enhanced immunogenic cell death in syngeneic mouse models of ovarian cancer</a>                              | Immunotherapy by stimulating the host immune system has been a promising therapeutic strategy for advanced ovarian cancer.                             |

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| June 04, 2021     | <a href="#">Hollow Mesoporous Silica Nanoparticles Gated by Chitosan-Copper Sulfide Composites as Theranostic Agents for the Treatment of Breast Cancer</a>  | The combination of chemotherapy and photothermal therapy (PTT) into a single formulation has attracted increasing attention as a strategy for enhancing             |
| June 04, 2021     | <a href="#">PH-triggered poly(ethylene glycol)-poly(lactic acid/glycolic acid)/ croconaine nanoparticles-assisted multiplexed photoacoustic imaging and enhanced photothermal cancer therapy</a>             | The most advantageous and attractive property of photoacoustic imaging is its capability to visualize and differentiate multiple species according to               |
| May 28, 2021      | <a href="#">Photoacoustic imaging of myocardial infarction region using non-invasive fibrin-targeted nanoparticles in a rat myocardial ischemia-reperfusion model</a>  | Background and Purpose: Myocardial infarction (MI) is a serious threat to public health.  |
| March 25, 2021    | <a href="#">One-step synthesis of multifunctional nanoparticles for CT/PA imaging guided breast cancer photothermal therapy</a>  | Advances in nanotheranostics have promoted the development of precision medicine, which has great potential as a weapon for clinical diagnosis and the              |
| March 12, 2021    | <a href="#">A multimodal molecular imaging approach targeting urokinase plasminogen activator receptor for the diagnosis, resection and surveillance of urothelial cell carcinoma</a>                        | With a 5-year recurrence rate of 30–78%, urothelial cell carcinoma (UCC) rates amongst the highest of all solid malignancies.                                       |
| February 23, 2021 | <a href="#">Gold nanoparticle-based nanoprobes with enhanced tumor targeting and photothermal/photodynamic response for therapy of osteosarcoma</a>  | Abstract Plasmonic nanomaterials, especially a wide variety of gold nanoparticles, demonstrate great potential for theranostics of cancer.                          |
| February 23, 2021 | <a href="#">Enhanced Antitumoral Activity and Photoacoustic Imaging Properties of AuNP-Enriched Endothelial Colony Forming Cells on Melanoma</a>   | Near infrared (NIR)-resonant gold nanoparticles (AuNPs) hold great promise in cancer diagnostics and treatment.   |
| February 23, 2021 | <a href="#">Multifunctional nanoparticles as theranostic agents for therapy and imaging of breast cancer</a>   | Over the last decade, there has been significant developments in nanotechnology, in particular for combined imaging and therapeutic applications (ther              |
| February 23, 2021 | <a href="#">Visualized podocyte-targeting and focused ultrasound responsive glucocorticoid nano-delivery system against immune-associated nephropathy without glucocorticoid side effect</a>                 | Glucocorticoids are widely used in the treatment of nephritis, however, its dose-dependent side effects, such as the increased risk of infection and m              |
| February 19, 2021 | <a href="#">Ultrasound molecular imaging of atherosclerosis for early diagnosis and therapeutic evaluation through leucocyte-like multiple targeted microbubbles</a>   | Cardiovascular diseases resulting from atherosclerosis have become a serious threat to human health.  |
| January 18, 2021  | <a href="#">Multifunctional nanotheranostic gold nanocage/ selenium core-shell for pai-guided chemo-photothermal synergistic therapy in vivo</a>   | Introduction: Cancer theragnosis involving cancer diagnosis and targeted therapy simultaneously in one integrated system would be a promising solution              |
| January 14, 2021  | <a href="#">Biomimetic Anti PD 1 Peptide Loaded 2D FePSe 3 Nanosheets for Efficient Photothermal and Enhanced Immune Therapy with Multimodal MR/PA/Thermal Imaging</a>                                       | Metal phosphorous trichalcogenides (MPX <sub>3</sub> ) are novel 2D nanomaterials that have recently been exploited as efficient photothermal–chemodynamic agents f |
| January 04, 2021  | <a href="#">Photoacoustic and magnetic resonance imaging of hybrid manganese dioxide-coated ultra-small NaGdF<sub>4</sub> nanoparticles for spatiotemporal modulation of hypoxia in head and neck cancer</a> | There is widespread interest in developing agents to modify tumor hypoxia in head and neck squamous cell carcinomas (HNSCC).  |
| January 04, 2021  | <a href="#">Multimodal Imaging of Pancreatic Ductal Adenocarcinoma Using Multifunctional Nanoparticles as Contrast Agents</a>  | Late diagnosis and refractory behavior toward current treatment protocols make pancreatic ductal adenocarcinoma (PDAC) one of the most difficult cancer             |
| January 04, 2021  | <a href="#">Multifunctional tumor-targeted PLGA nanoparticles delivering Pt(IV)/siBIRC5 for US/MRI imaging and overcoming ovarian cancer resistance</a>  | Cisplatin (Pt(II)) resistance is an important factor in the high mortality rates of ovarian cancer.   |

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| December 30, 2020  | <a href="#">Ultrasound Molecular Imaging of Renal Cell Carcinoma: VEGFR targeted therapy monitored with VEGFR1 and FSHR targeted microbubbles</a>   | Recent treatment developments for metastatic renal cell carcinoma offer combinations of immunotherapies or immunotherapy associated with tyrosine kinase    |
| November 03, 2020  | <a href="#">Comparison of photoacoustic and fluorescence tomography for the in vivo imaging of ICG-labelled liposomes in the medullary cavity in mice</a>   | Few reports quantitatively compare the performance of photoacoustic tomography (PAT) versus fluorescence molecular tomography (FMT) in vivo.                |
| November 03, 2020  | <a href="#">Targeted theranostics of lung cancer: PD-L1-guided delivery of gold nanoprisms with chlorin e6 for enhanced imaging and photothermal/photodynamic therapy</a>   | Peptide modified nanoparticles have emerged as powerful tools for enhanced cancer diagnosis and novel treatment strategies.                                 |
| October 19, 2020   | <a href="#">In Vivo Real-Time Pharmaceutical Evaluations of Near-Infrared II Fluorescent Nanomedicine Bound Polyethylene Glycol Ligands for Tumor Photothermal Ablation</a>   | Pharmaceutical evaluations of nanomedicines are of great significance for their further launch into industry and clinic.                                    |
| October 19, 2020   | <a href="#">Opto-acoustic synergistic irradiation for vaporization of natural melanin-cored nanodroplets at safe energy levels and efficient sono-chemo-photothermal cancer therapy</a>                                 | Rationale: Insufficient penetration and accumulation of theranostic payloads in solid tumors greatly challenge the clinical translation of cancer nano      |
| October 19, 2020   | <a href="#">Ultrasound-triggered therapeutic microbubbles enhance the efficacy of cytotoxic drugs by increasing circulation and tumor drug accumulation and limiting bioavailability and toxicity in normal tissues</a> | Most cancer patients receive chemotherapy at some stage of their treatment which makes improving the efficacy of cytotoxic drugs an ongoing and important   |
| October 19, 2020   | <a href="#">Different PEG-PLGA Matrices Influence In Vivo Optical/Photoacoustic Imaging Performance and Biodistribution of NIR-Emitting <math>\pi</math>-Conjugated Polymer Contrast Agents</a>                         | The $\pi$ -conjugated polymer poly[2,6-(4,4-bis-(2-ethylhexyl)-4H-cyclopenta[2,1-b;3,4-b0]-dithiophene)-alt-4,7-(2,1,3-benzothiadiazole)] (PCPDTBT) with de |
| October 16, 2020   | <a href="#">Dual-modal magnetic resonance and photoacoustic tracking and outcome of transplanted tendon stem cells in the rat rotator cuff injury model</a>   | Stem cells have been used to promote the repair of rotator cuff injury, but their fate after transplantation is not clear.                                  |
| October 16, 2020   | <a href="#">Engineering of SPECT/Photoacoustic Imaging/Antioxidative Stress Triple-Function Nanoprobe for Advanced Mesenchymal Stem Cell Therapy of Cerebral Ischemia</a>   | The precise transplantation, long-term tracking, and maintenance of stem cells with maximizing therapeutic effect are significant challenges in stem cell   |
| October 16, 2020   | <a href="#">Reduction Triggered In Situ Polymerization in Living Mice</a>   | "Smart" biomaterials that are responsive to physiological or biochemical stimuli have found many biomedical applications for tissue engineering, therapy    |
| October 16, 2020   | <a href="#">Platelet membrane-functionalized nanoparticles with improved targeting ability and lower hemorrhagic risk for thrombolysis therapy</a>  | Intravenous injection of thrombolytic drugs is the most effective strategy for the treatment of thrombotic diseases.  |
| October 16, 2020   | <a href="#">Iron(II) phthalocyanine loaded and as1411 aptamer targeting nanoparticles: A nanocomplex for dual modal imaging and photothermal therapy of breast cancer</a>   | Purpose: A multi-functional nanoplatform with diagnostic imaging and targeted treatment functions has aroused much interest in the nanomedical research     |
| October 16, 2020   | <a href="#">pH-responsive Ag2S nanodots loaded with heat shock protein 70 inhibitor for photoacoustic imaging-guided photothermal cancer therapy</a>  | Heat-treated cancer cells have thermo-resistance due to the up-regulated levels of heat shock proteins (HSP) resulting in low therapeutic efficiency        |
| September 09, 2020 | <a href="#">In vivo photoacoustic guidance of stem cell injection and delivery for regenerative spinal cord therapies</a>   | Significance: Stem cell therapies are of interest for treating a variety of neurodegenerative diseases and injuries of the spinal cord.                     |
| September 09, 2020 | <a href="#">The novel DPP-BDT nanoparticles as efficient photoacoustic imaging and positron emission tomography agents in living mice</a>   | Background: Molecular imaging is of great benefit to early disease diagnosis and timely treatment.  |
| September 09, 2020 | <a href="#">Construction of Nucleolin-Targeted Lipid Nanobubbles and Contrast-Enhanced Ultrasound Molecular Imaging in Triple-Negative Breast Cancer</a>  | Purpose: To construct aptamer AS1411-functionalized targeted lipid nanobubbles that could simultaneously target abnormally highly expressed nucleolin       |

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| June 01, 2020  | <a href="#">Monocyte mimics improve mesenchymal stem cell-derived extracellular vesicle homing in a mouse MI/RI model</a>  | Stem cell-derived extracellular vesicles (EVs) have been demonstrated to be effective in heart repair and regeneration post infarction.                |
| June 01, 2020  | <a href="#">Prussian blue nanocubes as a multimodal contrast agent for image-guided stem cell therapy of the spinal cord</a>   | Translation of stem cell therapies to treat injuries and diseases of the spinal cord is hindered by lack of real-time monitoring techniques to guide r |
| June 01, 2020  | <a href="#">Gambogic acid augments black phosphorus quantum dots (BPQDs)-based synergistic chemo-photothermal therapy through downregulating heat shock protein expression</a>                       | In an attempt to attain synergistic therapeutic benefits and address various intrinsic limitations of the highly efficient black phosphorus quantum do |
| May 01, 2020   | <a href="#">Melanin-instructed biomimetic synthesis of copper sulfide for cancer phototheranostics</a>   | Biomimetic synthesis is a promising strategy for the preparation of nanotheranostics with excellent biocompatibility.                                  |
| May 01, 2020   | <a href="#">Biodegradable theranostic nanoplatforms of albumin-biomaterialized nanocomposites modified hollow mesoporous organosilica for photoacoustic imaging guided tumor synergistic therapy</a> | Benefit from the integration of therapeutic and diagnostic functions, theranostic nanoplatforms have attracted widespread attention in preclinical res |
| May 01, 2020   | <a href="#">Co-delivery of Cu(I) chelator and chemotherapeutics as a new strategy for tumor theranostic</a>  | Chelating Cu from tumors has been verified as an effective and promising strategy for cancer therapy through antiangiogenesis.                         |
| April 01, 2020 | <a href="#">Less is more: Silver-AIE core@shell nanoparticles for multimodality cancer imaging and synergistic therapy</a>   | Nanomaterials with integrated multiple imaging and therapeutic modalities possess great potentials in accurate cancer diagnostics and enhanced therape |
| April 01, 2020 | <a href="#">Surface-modified GVs as nanosized contrast agents for molecular ultrasound imaging of tumor</a>  | Nanobubbles, as a kind of new ultrasound contrast agent (UCAs), have shown promise to penetrate tumor vasculature to allow for targeted imaging.       |
| April 01, 2020 | <a href="#">Rod-based urchin-like hollow microspheres of Bi2S3: Facile synthesis, photo-controlled drug release for photoacoustic imaging and chemo-photothermal therapy of tumor ablation</a>       | Hollow nanostructures have been evoked considerable attention owing to their intriguing hollow interior for important and potential applications in dr |
| April 01, 2020 | <a href="#">Scalable dextran-polypyrrole nano-assemblies with photothermal/photoacoustic dual capabilities and enhanced biocompatibility</a>   | Polypyrroles have shown great potential in photoacoustic imaging and photothermal therapy owing to its excellent photothermal conversion capabilities. |
| April 01, 2020 | <a href="#">Janus <math>\gamma</math>-Fe<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub>-based nanotheranostics for dual-modal imaging and enhanced synergistic cancer starvation/chemodynamic therapy</a>  | Multimodal cancer synergistic therapy exhibited remarkable advantages over monotherapy in producing an improved therapeutic efficacy.                  |
| April 01, 2020 | <a href="#">TRAIL-expressing cell membrane nanovesicles as an anti-inflammatory platform for rheumatoid arthritis therapy</a>  | Rheumatoid arthritis (RA) is one of the most common chronic autoimmune diseases.   |
| March 31, 2020 | <a href="#">Long Circulating Drug Dye Based Micelles with Ultrahigh pH Sensitivity for Deep Tumor Penetration and Superior Chemo Photothermal Therapy</a>  | Nanocarriers for chemo-photothermal therapy suffer from insufficient retention at the tumor site and poor penetration into tumor parenchyma.           |
| March 31, 2020 | <a href="#">Novel Multifunctional Nanoagent for Visual Chemo/Photothermal Therapy of Metastatic Lymph Nodes via Lymphatic Delivery</a>   | Breast cancer is one of the major diseases that threaten women's health.   |
| March 30, 2020 | <a href="#">Biologically Responsive Plasmonic Assemblies for Second Near-Infrared Window Photoacoustic Imaging-Guided Concurrent Chemo-Immunotherapy</a>   | We developed dual biologically responsive nanogapped gold nanoparticle vesicles loaded with immune inhibitor and carrying an anticancer polymeric prod |
| March 01, 2020 | <a href="#">Biodegradable CoS<sub>2</sub> nanoclusters for photothermal-enhanced chemodynamic therapy</a>  | Retaining in tumors for cancer diagnosis/treatment with sequential elimination from body is crucial to the clinical translation of inorganic medicamen |

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| March 01, 2020    | <a href="#">Bimetallic nanodots for tri-modal CT/MRI/PA imaging and hypoxia-resistant thermoradiotherapy in the NIR-II biological windows</a>                       | Hypoxic tumor microenvironment leads to resistance or failure of radiotherapy (RT).  |
| March 01, 2020    | <a href="#">Cathodic protected Mn<sup>2+</sup> by Na<sub>2</sub>WO<sub>3</sub> nanorods for stable magnetic resonance imaging-guided tumor photothermal therapy</a> | The stability and safety of magnetic resonance imaging (MRI) contrast agents (CAs) are crucial for accurate diagnosis and real-time monitor of tumor d |
| February 01, 2020 | <a href="#">Dynamic tracking of bulk nanobubbles from microbubbles shrinkage to collapse</a>  | Nanobubbles (NBs) have attracted great attention because of their potential role in interfacial science and application.                               |
| February 01, 2020 | <a href="#">Dual-stimuli responsive nanotheranostics for mild hyperthermia enhanced inhibition of Wnt/<math>\beta</math>-catenin signaling</a>                      | Wnt/ $\beta$ -catenin signaling cascade is highly associated with tumorigenesis and progression of various cancers.                                    |
| February 01, 2020 | <a href="#">Photomagnetic Prussian blue nanocubes: Synthesis, characterization, and biomedical applications</a>   | Nanoparticles play an important role in biomedicine.   |
| January 01, 2020  | <a href="#">"All-in-One" Silver Nanoprism Platform for Targeted Tumor Theranostics</a>  | Designing a multifunctional theranostic nanoplat-form with optional therapeutic strategies is highly desirable to select the most suitable therapeuti  |
| January 01, 2020  | <a href="#">Anti-G250 nanobody-functionalized nanobubbles targeting renal cell carcinoma cells for ultrasound molecular imaging</a>                                 | Traditional imaging examinations have difficulty in identifying benign and malignant changes in renal masses.  |
| January 01, 2020  | <a href="#">Photoacoustic Imaging Quantifies Drug Release from Nanocarriers via Redox Chemistry of Dye Labeled Cargo</a>  | We report a new approach to monitor drug release from nanocarriers via a paclitaxel–methylene blue conjugate (PTX-MB) with redox activity.             |
| January 01, 2020  | <a href="#">NIR/ROS Responsive Black Phosphorus QD Vesicles as Immunoadjuvant Carrier for Specific Cancer Photodynamic Immunotherapy</a>                            | 2D black phosphorus (BP) nanosheets and BP quantum dots (BPQD), as two main material styles of BP, are widely used in the biomedical filed.            |
| January 01, 2020  | <a href="#">Conjugation of a Scintillator Complex and Gold Nanorods for Dual-Modal Image-Guided Photothermal and X-ray-Induced Photodynamic Therapy of Tumors</a>   | Light-mediated therapy has many unique merits but monotherapy strategies rarely completely inhibit tumor growth because resistance often develops.     |
| January 01, 2020  | <a href="#">Dynamic solid-state ultrasound contrast agent for monitoring pH fluctuations in vivo .</a>  | The key challenge for in vivo biosensing is to design biomarker-responsive contrast agents that can be readily detected and monitored by broadly avail |
| January 01, 2020  | <a href="#">GSH Depleted PtCu 3 Nanocages for Chemodynamic Enhanced Sonodynamic Cancer Therapy</a>  | The ultrahigh concentration of glutathione (GSH) inside tumors destroys reactive oxygen species (ROS) based therapy, improving the outcome of chemodyn |
| January 01, 2020  | <a href="#">Phospholipid Oxygen Microbubbles for Image-Guided Therapy</a>   | In recent work, oxygen microbubbles (OMB) have been shown to oxygenate hypoxic tumors, increase radio-sensitivity and improve tumor control by radiati |
| January 01, 2020  | <a href="#">Photoacoustic Imaging-Trackable Magnetic Microswimmers for Pathogenic Bacterial Infection Treatment</a>   | Micro/nanorobots have been extensively explored as a tetherless small-scale robotic biodevice to perform minimally invasive interventions in hard-to   |
| January 01, 2020  | <a href="#">Assessment of Metastatic and Reactive Sentinel Lymph Nodes with B7-H3-Targeted Ultrasound Molecular Imaging: A Longitudinal Study in Mouse Models</a>   | Purpose: To explore the potential of B7-H3-targeted ultrasound molecular imaging (USMI) for longitudinal assessment and differentiation of metastatic  |
| January 01, 2020  | <a href="#">Effects of Freezing on Mesenchymal Stem Cells Labeled with Gold Nanoparticles</a>   | Stem cell therapies are a promising treatment for many patients suffering from diseases with poor prognosis.   |

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| January 01, 2020 | <a href="#">Inhibited metastasis and amplified chemotherapeutic effects by epigene-transfection based on a tumor-targeting nanoparticle</a>  | Purpose: Tumor metastasis and drug resistance have always been vital aspects to cancer mortality and prognosis.  |
| January 01, 2020 | <a href="#">Carbon-coated FeCo nanoparticles as sensitive magnetic-particle-imaging tracers with photothermal and magnetothermal properties</a>  | The low magnetic saturation of iron oxide nanoparticles, which are developed primarily as contrast agents for magnetic resonance imaging, limits the s |
| January 01, 2020 | <a href="#">Efficacy evaluation and mechanism study on inhibition of breast cancer cell growth by multimodal targeted fluorescent nanobubbles carrying AMD070 and ICG</a>                              | Objective: To construct targeted nanobubbles carrying both small-molecule CXCR4 antagonist AMD070 and light-absorbing material indocyanine green (ICG) |
| January 01, 2020 | <a href="#">Biodegradation-Mediated Enzymatic Activity-Tunable Molybdenum Oxide Nanourchins for Tumor-Specific Cascade Catalytic Therapy</a>   | Recent advances in nanomedicine have facilitated the development of potent nanomaterials with intrinsic enzyme-like activities (nanozymes) for cancer  |
| January 01, 2020 | <a href="#">Molecular imaging of advanced atherosclerotic plaques with folate receptor-targeted 2D nanoprobe</a>   | Vulnerable atherosclerotic plaques are responsible for most cardiovascular diseases (CVDs).  |
| January 01, 2020 | <a href="#">Multimodal theranostics augmented by transmembrane polymer-sealed nano-enzymatic porous MoS2 nanoflowers</a>   | Developing an all-in-one multimodal theranostic platform that can synergistically integrate sensitive photoacoustic (PA) imaging, enhanced phototherma |
| January 01, 2020 | <a href="#">PEGylated-folic acid-modified black phosphorus quantum dots as near-infrared agents for dual-modality imaging-guided selective cancer cell destruction</a>                                 | Biological systems have high transparency to 700–1100-nm near-infrared (NIR) light.  |
| January 01, 2020 | <a href="#">Ultra - small Pyropheophorbide - a Nanodots for Near - infrared Fluorescence/Photoacoustic Imaging-guided Photodynamic Therapy</a>   | Rationale: Nanoparticles (NPs) that are rapidly eliminated from the body offer great potential in clinical test.                                       |
| January 01, 2020 | <a href="#">On-demand drug release nanoplatfrom based on fluorinated aza-BODIPY for imaging-guided chemo-phototherapy</a>  | Intelligent drug delivery systems (DDS), integrating with multi-modal imaging guidance and controlled drug release, have practical significance in enh |
| January 01, 2020 | <a href="#">Magneto-plasmonic nanostars for image-guided and NIR-triggered drug delivery</a>   | Smart multifunctional nanoparticles with magnetic and plasmonic properties assembled on a single nanoplatfrom are promising for various biomedical app |
| January 01, 2020 | <a href="#">Microvascular Ultrasonic Imaging of Angiogenesis Identifies Tumors in a Murine Spontaneous Breast Cancer Model</a>   | The purpose of this study is to determine if microvascular tortuosity can be used as an imaging biomarker for the presence of tumor-associated angioge |
| January 01, 2020 | <a href="#">Tumor-Specific Endogenous Fe II -Activated, MRI-Guided Self-Targeting Gadolinium-Coordinated Theranostic Nanoplatforms for Amplification of ROS and Enhanced Chemodynamic Chemotherapy</a> | Low drug payload and lack of tumor-targeting for chemodynamic therapy (CDT) result in an insufficient reactive oxygen species (ROS) generation, which  |
| January 01, 2020 | <a href="#">Near-Infrared Light-Responsive Nitric Oxide Delivery Platform for Enhanced Radioimmunotherapy</a>  | Radiotherapy (RT) is a widely used way for cancer treatment.   |
| January 01, 2020 | <a href="#">Targeted nanobubbles carrying indocyanine green for ultrasound, photoacoustic and fluorescence imaging of prostate cancer</a>  | Objective: To construct prostate-specific membrane antigen (PSMA)-targeting, indocyanine green (ICG)-loaded nanobubbles (NBs) for multimodal (ultrasou |
| January 01, 2020 | <a href="#">Evaluation of ductal carcinoma in situ grade via triple-modal molecular imaging of B7-H3 expression</a>  | Ductal carcinoma in situ (DCIS) will account for 62,930 cases of breast cancer in 2019.  |
| January 01, 2020 | <a href="#">Biodegradable Bi 2 O 2 Se Quantum Dots for Photoacoustic Imaging Guided Cancer Photothermal Therapy</a>  | As new 2D layered nanomaterials, Bi2O2Se nanoplates have unique semiconducting properties that can benefit biomedical applications.                    |

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| January 01, 2020 | <a href="#">Ultrasound monitoring of magnet-guided delivery of mesenchymal stem cells labeled with magnetic lipid-polymer hybrid nanobubbles</a>        | Mesenchymal stem cells labeled with positively charged magnetic lipid-polymer hybrid nanobubbles could be tracked for magnet-guided delivery onto the             |
| January 01, 2020 | <a href="#">Glucose Oxidase-Instructed Traceable Self-Oxygenation/Hyperthermia Dually Enhanced Cancer Starvation Therapy</a>                            | Cancer theranostics based on glucose oxidase (GOx)-induced starvation therapy has got more and more attention in cancer management.                               |
| January 01, 2020 | <a href="#">Pickering Bubbles as Dual-Modality Ultrasound and Photoacoustic Contrast Agents</a>   | Microbubbles (MBs) stabilized by particle surfactants (i.e., Pickering bubbles) have better thermodynamic stability compared to MBs stabilized by small           |
| January 01, 2020 | <a href="#">Ultrasound/Optical Dual Modality Imaging for Evaluation of Vulnerable Atherosclerotic Plaques with Osteopontin Targeted Nanoparticles</a>   | Because of the high mortality of coronary atherosclerotic heart diseases, it is necessary to develop novel early detection methods for vulnerable atherosclerosis |
| January 01, 2020 | <a href="#">Coordination-induced exfoliation to monolayer Bi-anchored MnB 2 nanosheets for multimodal imaging-guided photothermal therapy of cancer</a> | Background: Rapid advance in biomedicine has recently vitalized the development of multifunctional two-dimensional (2D) nanomaterials for cancer therapy          |
| January 01, 2020 | <a href="#">Non-Invasive Photoacoustic Imaging of In Vivo Mice with Erythrocyte Derived Optical Nanoparticles to Detect CAD/MI</a>                      | Coronary artery disease (CAD) causes mortality and morbidity worldwide.   |
| January 01, 2020 | <a href="#">Molecular Engineered Squaraine Nanoprobe for NIR-II/Photoacoustic Imaging and Photothermal Therapy of Metastatic Breast Cancer</a>          | Various squaraine dyes have been developed for biological imaging.  |
| January 01, 2020 | <a href="#">Unique spectral signature of human cutaneous squamous cell carcinoma by photoacoustic imaging</a>   | Cutaneous squamous cell carcinoma (cSCC) is a common skin cancer with metastatic potential.   |
| January 01, 2020 | <a href="#">Magnetic targeted near-infrared II PA/MR imaging guided photothermal therapy to trigger cancer immunotherapy</a>                            | Rationale: Photothermal therapy (PTT) alone is easy to cause cancer recurrence and fail to completely resist metastasis, yet recurrence and metastasis            |
| January 01, 2020 | <a href="#">Multifunctional Nanoparticles for Multimodal Imaging-Guided Low-Intensity Focused Ultrasound/Immunosynergistic Retinoblastoma Therapy</a>   | Retinoblastoma (RB) is prone to delayed diagnosis or treatment and has an increased likelihood of metastasizing.  |
| January 01, 2020 | <a href="#">Tumor Microenvironment Adaptable Nanoplatform for O<sub>2</sub> Self Sufficient Chemo/Photodynamic Combination Therapy</a>                  | Malignant proliferation of tumor cells induces abnormal tissue microenvironments, leading to therapeutic resistance and poor therapeutic outcome.                 |
| January 01, 2020 | <a href="#">Biodegradable rare earth fluorochloride nanocrystals for phototheranostics</a>  | Rare earth (RE) doped inorganic nanocrystals have been demonstrated as efficient contrast agents for deep tissue shortwave-infrared (SWIR) imaging with           |
| January 01, 2020 | <a href="#">Transcranial Photoacoustic Detection of Blood-Brain Barrier Disruption Following Focused Ultrasound-Mediated Nanoparticle Delivery</a>      | Purpose: Blood-brain barrier disruption (BBBD) is of interest for treating neurodegenerative diseases and tumors by enhancing drug delivery.                      |
| January 01, 2020 | <a href="#">Gold Nanoframeworks with Mesopores for Raman-Photoacoustic Imaging and Photo Chemo Tumor Therapy in the Second Near Infrared Biowindow</a>  | Gold-based nanostructures with tunable wavelength of localized surface plasmon resonance (LSPR) in the second near-infrared (NIR-II) biowindow receive            |
| January 01, 2020 | <a href="#">Light-activated gold nanorod vesicles with NIR-II fluorescence and photoacoustic imaging performances for cancer theranostics</a>           | Fluorescence (FL) and photoacoustic (PA) imaging in the second near infrared window (NIR-II FL and NIR-II PA) hold great promise for biomedical applications      |

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| November 08, 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 |
| 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.                                |
| 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="#">Functionalized polymer microbubbles as new molecular ultrasound contrast agent to target P-selectin in thrombus</a>   | Thrombotic diseases rarely cause symptoms until advanced stage and sudden death.   |
| 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 |
| February 01, 2019 | <a href="#">Recent strategies on targeted delivery of thrombolytics</a>   | Thrombus formed in blood vessel is a progressive process, which would lead to life-threatening thrombotic diseases such as ischemic stroke.            |
| January 01, 2019  | <a href="#">Mussel-inspired functionalization of semiconducting polymer nanoparticles for amplified photoacoustic imaging and photothermal therapy</a>                      | A versatile and straightforward strategy for the encapsulation of semiconducting polymer nanoparticles (SPNs) using biocompatible polydopamine (PDA) a |
| January 01, 2019  | <a href="#">New Strategy for Specific Eradication of Implant-Related Infections Based on Special and Selective Degradability of Rhenium Trioxide Nanocubes</a>              | The greatest bottleneck for photothermal antibacterial therapy could be the difficulty in heating the infection site directly and specifically to evad |
| January 01, 2019  | <a href="#">In Vivo Photoacoustic Tracking of Mesenchymal Stem Cell Viability</a>   | Adult stem cell therapy has demonstrated improved outcomes for treating cardiovascular diseases in preclinical trials.                                 |
| January 01, 2019  | <a href="#">Platelet-Mimicking Biotaxis Targeting Vasculature-Disrupted Tumors for Cascade Amplification of Hypoxia-Sensitive Therapy</a>                                   | Tumorous vasculature plays key roles in sustaining tumor growth.   |
| 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="#">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="#">Development of a Human Photoacoustic Imaging Reporter Gene Using the Clinical Dye Indocyanine Green</a>   | Purpose: To develop a photoacoustic imaging (PAI) reporter gene that has high translational potential.   |
| January 01, 2019  | <a href="#">Bioinspired lipoproteins-mediated photothermia remodels tumor stroma to improve cancer cell accessibility of second nanoparticles</a>                           | The tumor stromal microenvironments (TSM) including stromal cells and extracellular matrix (ECM) form an abominable barrier hampering nanoparticles ac |
| 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 |



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| January 01, 2019  | <a href="#">Porphyrin–palladium hydride MOF nanoparticles for tumor-targeting photoacoustic imaging-guided hydrogenothermal cancer therapy</a>  | Hydrogen gas, which is an important energy resource, was recently discovered to have high advantage in the treatment of many diseases, but the current |
| January 01, 2019  | <a href="#">Indocyanine Green–Coated Gold Nanoclusters for Photoacoustic Imaging and Photothermal Therapy</a>   | Abstract Traditional oncology treatment modalities are often associated with a poor therapeutic index.   |
| 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 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 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 |
| 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 18, 2018  | <a href="#">In Vivo Molecular Ultrasound Assessment of Glioblastoma Neovasculature with Endoglin-Targeted Microbubbles</a>  | Objectives . Glioblastoma, as one of the most malignant cancer in the world, usually shows substantially increased angiogenesis.                       |
| 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 |
| May 29, 2018      | <a href="#">Performances of a Pristine Graphene-Microbubble Hybrid Construct as Dual Imaging Contrast Agent and Assessment of Its Biodistribution by Photoacoustic Imaging</a>          | Coupling near-infrared (NIR) nanoscale absorbing materials with microbubbles (MBs) can generate a multifunctional dual imaging contrast agent.         |
| May 01, 2018      | <a href="#">Histidine-rich glycoprotein-induced vascular normalization improves EPR-mediated drug targeting to and into tumors</a>  | Tumors are characterized by leaky blood vessels, and by an abnormal and heterogeneous vascular network.  |
| February 23, 2018 | <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, 2018  | <a href="#">Unfavorable effect of calcitriol and its low-calcemic analogs on metastasis of 4T1 mouse mammary gland cancer</a>   | Low vitamin D status is considered as a risk factor for breast cancer and has prognostic significance.   |
| 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="#">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="#">Endoglin targeted contrast enhanced ultrasound imaging in hepatoblastoma xenografts</a>   | Angiogenesis is required for the growth of hepatoblastoma (HB).  |
| 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.  |

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| January 01, 2018  | <a href="#">A Spectral Fiedler Field-based Contrast Platform for Imaging of Nanoparticles in Colon Tumor</a>   | In efforts to improve solid tumor imaging, and enable image-guided drug delivery (IGDD), multiple types of clinical imaging modalities have been combi |
| 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="#">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.                          |
| 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="#">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="#">Ultrasound molecular imaging as a non-invasive companion diagnostic for netrin-1 interference therapy in breast cancer</a>   | In ultrasound molecular imaging (USMI), ligand-functionalized microbubbles (MBs) are used to visualize vascular endothelial targets.                   |
| January 01, 2018  | <a href="#">Thy1-Targeted Microbubbles for Ultrasound Molecular Imaging of Pancreatic Ductal Adenocarcinoma</a>  | Purpose: To engineer a dual human and murine Thy1-binding single-chain-antibody ligand (Thy1-scFv) for contrast microbubble-enhanced ultrasound mole   |
| 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 |
| December 01, 2017 | <a href="#">Contrast enhanced ultrasound imaging can predict vascular-targeted photodynamic therapy induced tumor necrosis in small animals</a>  | Aims To evaluate the accuracy of contrast-enhanced ultrasound (CEUS) for monitoring tumor necrosis following WST-11 vascular targeted photodynamic the |
| August 01, 2017   | <a href="#">Measuring Absolute Blood Perfusion in Mice Using Dynamic Contrast-Enhanced Ultrasound</a>  | We investigated the feasibility of estimating absolute tissue blood perfusion using dynamic contrast-enhanced ultrasound (CEUS) imaging in mice.       |
| May 30, 2017      | <a href="#">Preparation and characterization of a novel silicon-modified nanobubble</a>  | Nanobubbles (NBs) opened a new field of ultrasound imaging. There is still no practical method to control the diameter of bubbles.                     |
| May 04, 2017      | <a href="#">Development of prostate specific membrane antigen targeted ultrasound microbubbles using bioorthogonal chemistry</a>   | Prostate specific membrane antigen (PSMA) targeted microbubbles (MBs) were developed using bioorthogonal chemistry.                                    |
| March 01, 2017    | <a href="#">Molecular Contrast-Enhanced Ultrasound Imaging of Radiation-Induced P-Selectin Expression in Healthy Mice Colon</a>  | Purpose To evaluate the feasibility of using molecular contrast-enhanced ultrasound (mCEUS) to image radiation (XRT)-induced expression of cell adhesi |
| February 28, 2017 | <a href="#">Magnetic Nanoliposomes as in Situ Microbubble Bombers for Multimodality Image-Guided Cancer Theranostics</a>   | Nanosized drug delivery systems have offered promising approaches for cancer theranostics.   |
| 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 01, 2016  | <a href="#">Image-Guided Hydrogen Gas Delivery for Protection from Myocardial Ischemia-Reperfusion Injury via Microbubbles</a>   | Cardiomyocyte death induced by ischemia-reperfusion is a major cause of morbidity and mortality worldwide.   |

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| January 01, 2016   | <a href="#">PBCA-based polymeric microbubbles for molecular imaging and drug delivery</a>  | Microbubbles (MB) are routinely used as contrast agents for ultrasound (US) imaging.   |
| 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="#">Nanoscale covalent organic polymers as a biodegradable nanomedicine for chemotherapy-enhanced photodynamic therapy of cancer</a>                                 | Recently, covalent-organic polymers (COPs), which covalently cross-link different types of organic molecules to form organic network structures, have  |
| January 01, 2016   | <a href="#">Detection and characterization of murine colitis and carcinogenesis by molecularly targeted contrast-enhanced ultrasound</a>                                     | AIM To study mucosal addressin cellular adhesion molecule-1 (MAdCAM-1) and vascular endothelial growth factor (VEGF)-targeted contrast enhanced ultras |
| 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="#">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="#">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="#">Tumor Microenvironment Modulation by Cyclopamine Improved Photothermal Therapy of Biomimetic Gold Nanorods for Pancreatic Ductal Adenocarcinomas</a>             | Due to the rich stroma content and poor blood perfusion, pancreatic ductal adenocarcinoma (PDA) is a tough cancer that can hardly be effectively treat |
| 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="#">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="#">Exosome-like silica nanoparticles: a novel ultrasound contrast agent for stem cell imaging</a>   | Ultrasound is critical in many areas of medicine including obstetrics, oncology, and cardiology with emerging applications in regenerative medicine.   |
| January 01, 2016   | <a href="#">Cationic microbubbles and antibiotic-free miniplasmid for sustained ultrasound – mediated transgene expression in liver</a>                                      | Despite the increasing number of clinical trials in gene therapy, no ideal methods still allow non-viral gene transfer in deep tissues such as the liv |
| January 01, 2016   | <a href="#">Nilotinib Enhances Tumor Angiogenesis and Counteracts VEGFR2 Blockade in an Orthotopic Breast Cancer Xenograft Model with Desmoplastic Response</a>              | Vascular endothelial growth factor (VEGF)/VEGF receptor (VEGFR)-targeted therapies predominantly affect nascent, immature tumor vessels.               |
| September 01, 2016 | <a href="#">Quantification of Endothelial <math>\alpha\beta 3</math> Expression with High-Frequency Ultrasound and Targeted Microbubbles: In Vitro and In Vivo Studies</a>   | Angiogenesis is a critical feature of plaque development in atherosclerosis and might play a key role in both the initiation and later rupture of plaq |
| July 21, 2016      | <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.  |
| 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 |

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| 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 01, 2016      | <a href="#">High-resolution renal perfusion mapping using contrast-enhanced ultrasonography in ischemia-reperfusion injury monitors changes in renal microperfusion</a>                | Alterations in renal microperfusion play an important role in the development of acute kidney injury with long- term consequences.                            |
| 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         |
| 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 photo- acoustic imaging applications.                            |
| 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="#">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 tun        |
| 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="#">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="#">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-inva        |
| January 01, 2015   | <a href="#">Exploring Targeted Contrast-Enhanced Ultrasound to Detect Neural Inflammation: An Example of Standard Nomenclature</a>   | Targeted contrast-enhanced ultrasound (TCEUS) is an innovative method of molecular imaging used for detection of inflammatory biomarkers in vivo.             |
| 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.   |
| 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        |
| 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        |

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| June 15, 2015      | <a href="#">Breast Cancer Detection by B7-H3-Targeted Ultrasound Molecular Imaging</a>  | Ultrasound is a complimentary imaging modality to mammography in breast cancer detection in particular in patients with dense breast tissue, but is li              |
| June 01, 2015      | <a href="#">Quantification of bound microbubbles in ultrasound molecular imaging</a>  | Molecular markers associated with diseases can be visualized and quantified noninvasively with targeted ultrasound contrast agent (t-UCA) consisting o              |
| 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                |
| March 01, 2015     | <a href="#">Vascular Endothelial Growth Factor Receptor Type 2–targeted Contrast-enhanced US of Pancreatic Cancer Neovasculature in a Genetically Engineered Mouse Model: Potential for Earlier Detection</a> | PURPOSE: To test ultrasonographic (US) imaging with vascular endothelial growth factor receptor type 2 (VEGFR2)-targeted microbubble contrast material              |
| 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="#">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="#">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    |
| January 01, 2015   | <a href="#">Multi-stimuli responsive Cu<sub>2</sub>S nanocrystals as trimodal imaging and synergistic chemo-photothermal therapy agents</a>   | A size and shape tuned, multifunctional metal chalcogenide, Cu <sub>2</sub> S-based nanotheranostic agent is deve- loped for trimodal imaging and multimodal therap |
| January 01, 2015   | <a href="#">Subharmonic, non-linear fundamental and ultraharmonic imaging of microbubble contrast at high frequencies.</a>  | There is increasing use of ultrasound contrast agent in high-frequency ultrasound imaging.  |
| 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="#">Ultrasound Molecular Imaging of Vascular Endothelial Growth Factor Receptor 2 Expression for Endometrial Receptivity Evaluation</a>   | Purpose: Ultrasound (US) molecular imaging by examining the expression\nof vascular endothelial growth factor receptor 2 (VEGFR2) on uterus\nvascular               |
| 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="#">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.  |
| 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               |
| 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.                     |

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| 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                                |
| 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                           |
| June 01, 2014     | <a href="#">Comparison of dynamic contrast-enhanced MR, ultrasound and optical imaging modalities to evaluate the antiangiogenic effect of PF-03084014 and sunitinib</a>  | Noninvasive imaging has been widely applied for monitoring antiangiogenesis therapy in cancer drug discovery.  |
| 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 abnor |
| April 15, 2014    | <a href="#">Exercise performance and peripheral vascular insufficiency improve with AMPK activation in high-fat diet-fed mice</a>   | Intermittent claudication is a form of exercise intolerance characterized by muscle pain during walking in patients with peripheral artery disease (PA                           |
| March 01, 2014    | <a href="#">Ultrasound Molecular Imaging in a Human CD276 Expression-Modulated Murine Ovarian Cancer Model.</a>   | PURPOSE: To develop a mouse ovarian cancer model that allows modulating the expression levels of human vascular targets in mouse xenograft tumors and                            |
| 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 a                           |
| 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="#">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="#">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 o                           |
| 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.  |
| 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="#">Bio-ink properties and printability for extrusion printing living cells</a>   | Angiogenesis is a common pathological characteristic of many solid tumors and vulnerable atherosclero- tic plaques.  |

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| 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.                                       |
| November 01, 2012 | <a href="#">Use of ultrasound to assess renal reperfusion and P-selectin expression following unilateral renal ischemia.</a>  | Renal ischemia-reperfusion injury is a major cause of acute kidney injury that carries a high mortality rate and increases the risk of later developme |
| 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.                |
| 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="#">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 |
| June 01, 2011     | <a href="#">In Vivo Targeted Contrast Enhanced Micro-Ultrasound to Measure Intratumor Perfusion and Vascular Endothelial Growth Factor Receptor 2 Expression in a Mouse Orthotopic Bladder Cancer Model</a> | Purpose: We evaluated the feasibility of using targeted contrast enhanced micro-ultrasound imaging to assess intratumor perfusion and vascular endothe |
| May 01, 2011      | <a href="#">Assessing vesicoureteral reflux in live inbred mice via ultrasound with a microbubble contrast agent</a>  | Vesicoureteral reflux (VUR) is a common pediatric anomaly linked to renal scarring and hypertension.   |
| March 01, 2011    | <a href="#">Tumor Angiogenic Marker Expression Levels during Tumor Growth: Longitudinal Assessment with Molecularly Targeted Microbubbles and US Imaging</a>  | PURPOSE: To evaluate the use of molecularly targeted microbubbles (MBs) and ultrasonography (US) in the noninvasive assessment of the level of express |
| November 27, 2010 | <a href="#">Ultrasound-assisted non-viral gene transfer to the salivary glands</a>  | We report a non-viral gene transfer method utilizing ultrasound induced microbubble destruction to allow the uptake of plasmid gene transfer vectors t |
| March 01, 2010    | <a href="#">Targeted contrast-enhanced ultrasound imaging of tumor angiogenesis with contrast microbubbles conjugated to integrin-binding knottin peptides.</a>   | UNLABELLED: Targeted contrast-enhanced ultrasound imaging is increasingly being recognized as a powerful imaging tool for the detection and quantifica |
| January 01, 2009  | <a href="#">Nonlinear contrast imaging with an array-based micro-ultrasound system</a>  | The main goal of this study was to determine the optimal strategy for a real-time nonlinear contrast mode for small-animal imaging at high frequenc    |
| January 01, 1990  | <a href="#">Biosynthesis of lipid A in Escherichia coli: Acyl carrier protein-dependent incorporation of laurate and myristate</a>  | In previous studies we described enzyme(s) from Escherichia coli that transfer two 3-deoxy-D-manno-octulosonate (KDO) residues from two CMP-KDO molecu |