Title	Journal	Link	Publication date	References	Top Paper
In Vivo Ultrasound and Photoacoustic Imaging of Nanoparticle-Engineered T Cells and Post-Treatment Assessment to Guide Adoptive Cell Immunotherapy	ACS Nano	https://doi.org/10.1021/acsnano.4c12929	2025	Kelsey P., Kubelick, Jinhwan, Kim, Myeongsoo, Kim, Xinyue, Huang, Chenxiao, Wang, Seoyoon, Song, Younan, Xia, Stanislav Y., Emelianov	Yes
A simple and robust nanosystem for photoacoustic imaging of bladder cancer based on α5β1-targeted gold nanorods	Journal of Nanobiotechnology	https://doi.org/10.1186/s12951-023-02028-5	2023	Massimo, Alfano, Elisa, Alchera, Angelina, Sacchi, Alessandro, Gori, Giacomo, Quilici, Irene, Locatelli, Chiara, Venegoni, Roberta, Lucianò, Anna Maria, Gasparri, Barbara, Colombo, Giulia, Taiè, Jithin, Jose, Paolo, Armanetti, Luca, Menichetti, Giovanna, Musco, Andrea, Salonia, Angelo, Corti, Flavio, Curnis	Yes
Visual inertial odometry enabled 3D ultrasound and photoacoustic imaging	Biomedical Optics Express	https://opg.optica.org/abstract.cfm?URI=boe-14-6-2756	2023	Deeksha M., Sankepalle, Brian, Anthony, Srivalleesha, Mallidi	Yes
Dual Nanozyme-Driven PtSn Bimetallic Nanoclusters for Metal-Enhanced Tumor Photothermal and Catalytic Therapy	ACS Nano	https://doi.org/https://doi.org/10.1021/acsnano.3c00423	2023	Yanlin, Zhu, Ruoxi, Zhao, Lili, Feng, Chen, Wang, Shuming, Dong, Mikhail V., Zyuzin, Alexander, Timin, Narisa, Hu, Bin, Liu, Piaoping, Yang	Yes
Combination Therapy with a Bispecific Antibody Targeting the hERG1/β1 Integrin Complex and Gemcitabine in Pancreatic Ductal Adenocarcinoma.	Cancers	http://www.ncbi.nlm.nih.gov/pubmed/37046674	2023	Tiziano, Lottini, Claudia, Duranti, Jessica, Iorio, Michele, Martinelli, Rossella, Colasurdo, Franco Nicolás, D'Alessandro, Matteo, Buonamici, Stefano, Coppola, Valentina, Devescovi, Vincenzo, La Vaccara, Alessandro, Coppola, Roberto, Coppola, Elena, Lastraioli, Annarosa, Arcangeli	Yes
Recent advances in photoacoustic blind source spectral unmixing approaches and the enhanced detection of endogenous tissue chromophores	Frontiers in Signal Processing	https://doi.org/10.3389/frsip.2022.984901	2022	Valeria, Grasso, Hafiz Wajahat, Hassan, Peyman, Mirtaheri, Regine, Willumeit-Römer, Jithin, Jose	Yes
P2Y12 Inhibition in Murine Myocarditis Results in Reduced Platelet Infiltration and Preserved Ejection Fraction	Cells	https://www.mdpi.com/2073-4409/10/12/3414	2021	Sarah, Schmidt, Wilfried, Reichardt, Beat, Kaufmann, Carolin, Wadle, Dominik, von Elverfeldt, Peter, Stachon, Ingo, Hilgendorf, Dennis, Wolf, Timo, Heidt, Daniel, Duerschmied, Karlheinz, Peter, Christoph, Bode, Constantin, von zur Mühlen, Alexander, Maier	Yes

Title	Journal	Link	Publication date	References	Top Paper
Early diagnosis of bladder cancer by photoacoustic imaging of tumor-targeted gold nanorods	Photoacoustics	https://www.sciencedirect.com/science/article/pii/S2213597922000659?via%3Dihub	2022	Elisa, Alchera, Matteo, Monieri, Mirko, Maturi, Irene, Locatelli, Erica, Locatelli, Silvia, Tortorella, Angelina, Sacci, Angelo, Corti, Manuela, Nebuloni, Roberta, Luciano, Filippo, Pederzoli, Francesco, Montorsi, Andrea, Salonia, Sandra, Meyer, Jithin, Jose, Pierangela, Giustetto, Mauro Comes, Franchina, Flavio, Curnis, Massimo, Alfano	Yes
Photoacoustic properties of polypyrrole nanoparticles	Nanomaterials	https://doi.org/10.3390/nano11092457	2021	Peter, Keša, Monika, Paúrová, Michal, Babič, Tomáš, Heizer, Petr, Matouš, Karolína, Turnovcová, Dana, Mareková, Luděk, Šefc, Vít, Herynek	Yes
Magnetic black phosphorus microbubbles for targeted tumor theranostics	Nanophotonics	https://www.degruyter.com/document/doi/10.1515/nanoph-2021-0085/html	2021	Yao, Zhu, Yingying, Liu, Zhongjian, Xie, Tianzhen, He, Lili, Su, Fengjuan, Guo, Gulzira, Arkin, Xiaoshu, Lai, Jinfeng, Xu, Han, Zhang	Yes
Morphological, functional, and molecular assessment of breast cancer bone metastases by experimental ultrasound techniques compared with magnetic resonance imaging and histological analysis	Bone	https://www.sciencedirect.com/science/article/pii/S8756328220306098?via%3Dihub#...	2021	Henrik, Heinen, Lisa, Seyler, Vanessa, Popp, Konstantin, Hellwig, Aline, Bozec, Michael, Uder, Stephan, Ellmann, Tobias, Bäuerle	Yes
Contrast-Enhanced Multispectral Photoacoustic Imaging for Irregular Hepatectomy Navigation: A Pilot Study	ACS Biomaterials Science & Engineering	https://pubs.acs.org/doi/10.1021/acsbiomaterials.0c00921	2020	Yueming, Zhang, Jing, Lv, Pingguo, Liu, Xingyang, Zhao, Kang, Chen, Qiaolin, Li, Liming, Nie, Chihua, Fang	Yes
Clinically-applicable perfluorocarbon-loaded nanoparticles for in vivo photoacoustic,19f magnetic resonance and fluorescent imaging	Nanotheranostics	https://doi.org/10.7150/ntno.26208	2018	Edyta, Swider, Khalid, Daoudi, Alexander H.J., Staal, Olga, Koshkina, N., Koen van Riessen, Eric, van Dinther, I. Jolanda M., de Vries, Chris L., de Korte, Mangala, Srinivas	Yes
Tetrazine-Derived Near-Infrared Dye as a Facile Reagent for Developing Targeted Photoacoustic Imaging Agents	Molecular Pharmaceutics	https://doi.org/10.1021/acs.molpharmaceut.0c00441	2020	Samantha, Slikboer, Zoya, Naperstkow, Nancy, Janzen, Amber, Faraday, Yohannes, Soenjaya, Johann, Le Floc'h, Salma, Al-Karmi, Rowan, Swann, Kevin, Wyszatko, Christine E. M., Demore, Stuart, Foster, John F., Valliant	Yes
Silicon carbide nanoparticles as a photoacoustic and photoluminescent dual-imaging contrast agent for long-term cell tracking	Nanoscale Advances	http://xlink.rsc.org/?DOI=C9NA00237E	2019	Fang, Chen, Eric R., Zhao, Tao, Hu, Yuesong, Shi, Donald J., Sirbuly, Jesse V., Jokerst	Yes
Transcranial Photoacoustic Detection of Blood-Brain Barrier Disruption Following Focused Ultrasound-Mediated Nanoparticle Delivery	Molecular Imaging and Biology	http://link.springer.com/10.1007/s11307-019-01397-4	2020	Johann, Le Floc'h, Hoang D., Lu, Tristan L., Lim, Christine, Démoré, Robert K., Prud'homme, Kullervo, Hynynen, F. Stuart, Foster	Yes

Title	Journal	Link	Publication date	References	Top Paper
New Strategy for Specific Eradication of Implant-Related Infections Based on Special and Selective Degradability of Rhenium Trioxide Nanocubes	ACS Applied Materials & Interfaces	https://pubs.acs.org/doi/10.1021/acsami.9b07359	2019	Wenlong, Zhang, Chuang, Yang, Ziyu, Lei, Guoqiang, Guan, Shu-ang, He, Zhenbo, Zhang, Rujia, Zou, Hao, Shen, Junqing, Hu	Yes
In Vivo Photoacoustic Tracking of Mesenchymal Stem Cell Viability	ACS Nano	https://pubs.acs.org/doi/10.1021/acsnano.9b01802	2019	Kabir S., Dhada, Derek S., Hernandez, Laura J., Suggs	Yes
Indocyanine Green J Aggregates in Polymersomes for Near-Infrared Photoacoustic Imaging	ACS Applied Materials & Interfaces	https://pubs.acs.org/doi/10.1021/acsami.9b14519	2019	Behzad, Changalvaie, Sangheon, Han, Ehsan, Moaseri, Federica, Scaletti, Lauren, Truong, Rosalie, Caplan, Alice, Cao, Richard, Bouchard, Thomas M., Truskett, Konstantin V., Sokolov, Keith P., Johnston	Yes
Development of a Human Photoacoustic Imaging Reporter Gene Using the Clinical Dye Indocyanine Green	Radiology: Imaging Cancer	http://pubs.rsna.org/doi/10.1148/rycan.2019190035	2019	Nivin N., Nyström, Lawrence C.M., Yip, Jeffrey J.L., Carson, Timothy J., Scholl, John A., Ronald	Yes
Evaluation of ductal carcinoma in situ grade via triple-modal molecular imaging of B7-H3 expression	npj Breast Cancer	http://dx.doi.org/10.1038/s41523-020-0158-y	2020	Sunitha, Bachawal, Gregory R., Bean, Gregor, Krings, Katheryne E., Wilson	Yes
Non-Invasive Photoacoustic Imaging of In Vivo Mice with Erythrocyte Derived Optical Nanoparticles to Detect CAD/MI	Scientific Reports	http://dx.doi.org/10.1038/s41598-020-62868-1	2020	Yonggang, Liu, Taylor, Hanley, Hao, Chen, Steven R., Long, Sanjiv S., Gambhir, Zhen, Cheng, Joseph C., Wu, Georges El, Fakhri, Bahman, Anvari, Raiyan T., Zaman	Yes
Assessment of Metastatic and Reactive Sentinel Lymph Nodes with B7-H3-Targeted Ultrasound Molecular Imaging: A Longitudinal Study in Mouse Models	Molecular Imaging and Biology	http://link.springer.com/10.1007/s11307-020-01478-9	2020	Fengyang, Zheng, Pan, Li, Sunitha V., Bachawal, Huaijun, Wang, Chaolun, Li, Wei, Yuan, Beijian, Huang, Ramasamy, Paulmurugan	Yes
Dynamic solid-state ultrasound contrast agent for monitoring pH fluctuations in vivo .	ACS Sensors	https://pubs.acs.org/doi/10.1021/acssensors.0c00245	2020	Julia Ann-Therease, Walker, Xiaowei, Wang, Karlheinz, Peter, Kristian, Kempe, Simon Robert, Corrie	Yes
Photoacoustic Imaging Quantifies Drug Release from Nanocarriers via Redox Chemistry of Dye-Labeled Cargo	Angewandte Chemie International Edition	https://onlinelibrary.wiley.com/doi/abs/10.1002/anie.201914120	2020	Ananthakrishnan Soundaram, Jeevarathinam, Jeanne E., Lemaster, Fang, Chen, Eric, Zhao, Jesse V., Jokerst	Yes
Noninvasive monitoring of liver metastasis development via combined multispectral photoacoustic imaging and fluorescence diffuse optical tomography	International Journal of Biological Sciences	http://www.ijbs.com/v16p1616.htm	2020	Jonathan, Lavaud, Maxime, Henry, Pascal, Gayet, Arnold, Fertin, Julien, Vollaire, Yves, Usson, Jean-Luc, Coll, Véronique, Josserand	Yes
Surface-anchored framework for generating RhD-epitope stealth red blood cells	Science Advances	https://advances.sciencemag.org/lookup/doi/10.1126/sciadv.aaw9679	2020	Yueqi, Zhao, Mingjie, Fan, Yanni, Chen, Zhaoming, Liu, Changyu, Shao, Biao, Jin, Xiaoyu, Wang, Lanlan, Hui, Shuaifei, Wang, Zhaoping, Liao, Daishun, Ling, Ruikang, Tang, Ben, Wang	Yes

Title	Journal	Link	Publication date	References	Top Paper
Maltotriose-based probes for fluorescence and photoacoustic imaging of bacterial infections	Nature Communications	http://dx.doi.org/10.1038/s41467-020-14985-8	2020	Aimen, Zlitni, Gayatri, Gowrishankar, Idan, Steinberg, Tom, Haywood, Sanjiv, Sam Gambhir	Yes
Gadolinium Doping Enhances the Photoacoustic Signal of Synthetic Melanin Nanoparticles: A Dual Modality Contrast Agent for Stem Cell Imaging	Chemistry of Materials	http://pubs.acs.org/doi/10.1021/acs.chemmater.8b04333	2018	Jeanne E., Lemaster, Zhao, Wang, Ali, Hariri, Fang, Chen, Ziying, Hu, Yuran, Huang, Christopher V., Barback, Richard, Cochran, Nathan C., Gianneschi, Jesse V, Jokerst	Yes
Performances of a Pristine Graphene-Microbubble Hybrid Construct as Dual Imaging Contrast Agent and Assessment of Its Biodistribution by Photoacoustic Imaging	Particle & Particle Systems Characterization	http://doi.wiley.com/10.1002/ppsc.201800066	2018	Yosra, Toumia, Barbara, Cerroni, Philippe, Trochet, Savino, Lacerenza, Letizia, Oddo, Fabio, Domenici, Gaio, Paradossi	Yes
Intraoperative Resection Guidance with Photoacoustic and Fluorescence Molecular Imaging Using an Anti-B7-H3 Antibody-Indocyanine Green Dual Contrast Agent	Clinical Cancer Research	http://doi.org/10.1158/1078-0432.CCR-18-0417	2018	Katheryne E., Wilson, Sunitha V, Bachawal, Juergen K., Willmann	Yes
Spectroscopic photoacoustic molecular imaging of breast cancer using a B7-H3-targeted ICG contrast agent	Theranostics	https://doi.org/10.7150/thno.18217	2017	Katheryne E., Wilson, Sunitha V., Bachawal, Lotfi, Abou-Elkacem, Kristen, Jensen, Steven, Machtaler, Lu, Tian, Jürgen K., Willmann	Yes
Molecular Contrast-Enhanced Ultrasound Imaging of Radiation-Induced P-Selectin Expression in Healthy Mice Colon	International Journal of Radiation Oncology*Biology*Physics	http://linkinghub.elsevier.com/retrieve/pii/S0360301616333843	2017	Ahmed, El Kaffas, Kevin, Smith, Pooja, Pradhan, Steven, Machtaler, Huaijun, Wang, Rie, von Eyben, Jürgen K., Willmann, Dimitre, Hristov	Yes
Multimodal imaging-guided NIR-II photo-gas nanoplatform amplifies PD-1 blockade for synergistic TNBC therapy	Theranostics	https://doi.org/10.7150/thno.133453	2026	Linlin, Song, Meixu, Chen, Huiling, Wang, Xin, Wang, Tianyue, Xu, Heqing, Zhang, Shuwen, Ran, Liwen, Huang, Yingying, Ma, Zhihui, Liu, Zihan, Xu, Yujie, Zhao, Zichang, Liu, Yong, Luo, Xiujun, Yu, Yulan, Peng, Hubing, Shi, Jing, Jing, Xiujing, He	No
Noninvasive Photoacoustic Imaging of Microscale Material Degradation in a Poly(4-hydroxybutyrate) Resorbable Hernia Mesh	ACS Applied Polymer Materials	https://pubs.acs.org/doi/10.1021/acsapm.6c01839	2026	Marie Z., Cilliers, Daolong, Chen, Joseph C., Bear, Emily J., Deniszczyc, Lawrence, Nip, Siyu, Qian, Hanieh, Taghani, Mark F., Lythgoe, Daniel J., Stuckey, P. Stephen, Patrick	No
Contrasting temporal dynamics of fluorescence and photoacoustic signals from Cetuximab-IRDye800 conjugate in EGFR-overexpressing tumors	Sci. Adv	https://www.science.org	2026	Mohammad A, Saad, Derek, Allen, Allison, Sweeney, Marvin, Xavierselvan, Srivalleesha, Mallidi, Tayyaba, Hasan	No
Multimodal Nanobubbles Carrying Indocyanine Green and VCAM-1 Targeting Peptide for Molecular Imaging of DOX-Induced Cardiotoxicity	International Journal of Nanomedicine	https://www.dovepress.com/multimodal-nanobubbles-carrying-indocyanine-green-and...	2026	Yingxin, Sun, Jun, Zhang, Deng, Liu, Xin, Li, Xuemei, Chen, Anxin, Zhang, Yanli, Guo	No
Lipoic acid-engineered nanodroplets for multimodal imaging and enhanced sonodynamic therapy in melanoma treatment	Theranostics	https://www.thno.org/v16p5278.htm	2026	Ziyao, Wang, Yongchao, Yao, Ziyan, Feng, Yulong, Liao, Liyun, Wang, Xueyang, Xiao, Wenchuang, Hu, Zhiyong, Qian, Li, Qiu	No

Title	Journal	Link	Publication date	References	Top Paper
Acoustic delivery of indocyanine green via biosynthetic gas vesicles for tumor photothermal therapy	PLOS Biology	https://dx.plos.org/10.1371/journal.pbio.3003786	2026	Jiaqi, Zhang, Licong, Huang, Shuhui, Wang, Jingwen, Ding, Yuping, Yang, Chenhui, Li, Ping, Zhao, Qian, Li, Fei, Yan	No
Harnessing Ultrasound for Tumor Vascular Targeting: From Mechanistic Insights to Clinical Monitoring and Therapeutic Applications	BIO Integration	https://doi.org/10.15212/bioi-2025-0117	2026	Lingling, Lei, Huai, Yang, Meng, Du, Youchao, Chen	No
Rapid and Specific Cell-Surface Anchoring of Gold Nanostars for Photoacoustic BMSC Imaging	BIO Integration	https://doi.org/10.15212/bioi-2026-0012	2026	Renhao, Xu, Yanmei, Cai, Xiaobin, Dong, Xuezhi, Wang, Wenyi, Zheng, Ning, Zhang, Yanni, He, Hongmei, Liu	No
Prostate specific membrane antigen-targeted multimodal imaging nanobubbles with ultrasound irradiation inhibit prostate cancer growth via autophagy activation	Acta Biomaterialia	https://doi.org/10.1016/j.actbio.2026.02.036	2026	Yi, Ling, Xunhu, Dong, Jun, Zhang, Deng, Liu, Xin, Li, Li, Dong, Xuemei, Chen, Luofu, Wang, Jun, Deng, Yanli, Guo	No
Characterization of Fluorophore-Quencher Pairs for Distance-Dependent Molecular Sensing in Photoacoustic Imaging	Chemical & Biomedical Imaging	https://doi.org/10.1021/cbmi.5c00178	2026	Salma Sultana, Tunny, Toby D. M., Bell, Ekaterina, Salimova, Kevin W., Plaxco, Christoph E., Hagemeyer, Simon R., Corrie	No
Acoustic Delivery of Plasma Low-Density Lipoprotein into Liver via ApoB100-Targeted Microbubbles Inhibits Atherosclerotic Plaque Growth	ACS Applied Materials and Interfaces	https://doi.org/10.1021/acsami.4c00999	2024	Zhenzhou, Li, Yi, Zhou, Manlin, Lai, Jingna, Luo, Fei, Yan	No
PLGA Nanoplatform for the Hypoxic Tumor Delivery: Folate Targeting, Therapy, and Ultrasound/Photoacoustic Imaging	ACS Applied Bio Materials	https://doi.org/10.1021/acsabm.4c00853	2024	Abhishesh Kumar, Mehata, Jyoti, Bonlawar, Rupen, Tamang, Ankit Kumar, Malik, Aseem, Setia, Shailendra, Kumar, Ranadheer Reddy, Challa, Bhaskar, Vallamkonda, Biplob, Koch, Madaswamy S., Muthu	No
Controllable Thrombolysis Using a Nanobubble-Imaging-Guided rtPA Targeted Delivery Strategy	BME Frontiers	https://doi.org/10.34133/bmef.0040	2024	Jian, Tang, Huiting, Xu, Mingxi, Li, Yang, Liu, Fang, Yang	No
Contrast enhanced photoacoustic detection of fibrillar collagen in the near infrared region-I	Nanoscale Advances	https://doi.org/10.1039/d4na00204k	2024	Inna, Solomonov, Irene, Locatelli, Silvia, Tortorella, Manu, Unni, Shay Lee, Aharoni, Elisa, Alchera, Erica, Locatelli, Mirko, Maturi, Chiara, Venegoni, Roberta, Lucianò, Andrea, Salonia, Angelo, Corti, Flavio, Curnis, Valeria, Grasso, Gayathri, Malamal, Jithin, Jose, Mauro, Comes Franchini, Irit, Sagi, Massimo, Alfano	No
Fluorescence and photoacoustic (FL/PA) dual-modal probe: Responsive to reactive oxygen species (ROS) for atherosclerotic plaque imaging	Biomaterials	https://doi.org/10.1016/j.biomaterials.2024.122765	2025	Qianqian, Yu, Yi, Duan, Nian, Liu, Zhirong, Zhu, Ying, Sun, Haojian, Yang, Yiqi, Shi, Xiangyu, Li, Wei Hong, Zhu, Lixin, Wang, Qi, Wang	No
Photoacoustic imaging of a cyanine dye targeting bacterial infection	Scientific Reports	https://doi.org/10.1038/s41598-024-69148-2	2024	Rowan, Swann, Daniel, Hernández-Valdés, Luis Rafael, Silva, Yusra Mahmood, Marfatia, Mohamed E., El-Zaria, Afaf R., Genady, Jacek M., Kwiecien, John F., Valliant, Saman, Sadeghi	No

Title	Journal	Link	Publication date	References	Top Paper
Therapeutic and Contrast Agents for Photoacoustic Imaging-Guided Photothermal Therapy: A Narrative Review	Nanotheranostics	https://doi.org/10.7150/ntno.96286	2024	Donni Kis, Apriyanto, Mitrayana, Andreas, Setiawan, Rini, Widyaningrum	No
Aminolysis-mediated single-step surface functionalization of poly (butyl cyanoacrylate) microbubbles for ultrasound molecular imaging	Journal of Nanobiotechnology	https://doi.org/10.1186/s12951-024-02806-9	2024	Junlin, Chen, Bi, Wang, Anshuman, Dasgupta, Céline, Porte, Lisa, Eckardt, Jinwei, Qi, Marek, Weiler, Twan, Lammers, Anne, Rix, Yang, Shi, Fabian, Kiessling	No
Molecular Engineering of a Tumor-Targeting Thione-Derived Diketopyrrolopyrrole Photosensitizer to Attain NIR Excitation Over 850 nm for Efficient Dual Phototherapy	Advanced Science	https://doi.org/10.1002/advs.202407727	2024	Gang, Xu, Yunxia, Song, Haifeng, Jin, Pengmin, Shi, Yubo, Jiao, Fangzhou, Cao, Jie, Pang, Yanyan, Sun, Lei, Fang, Xing Hua, Xia, Jian, Zhao	No
US/PA/MR multimodal imaging-guided multifunctional genetically engineered bio-targeted synergistic agent for tumor therapy	Journal of Nanobiotechnology	https://doi.org/10.1186/s12951-024-02868-9	2024	Li, Ren, Yaotai, Wang, Yu, Tang, Fang, Wang, Yan, Du, Xia, Ou, Li, Lin, Zhong, Zhang, Yan, Ding, Meixian, Wu, Yijun, Zhou, Mingyang, Zhang, Qi, Wang, Jianzhong, Zou	No
Engineering Hyperechogenic Colloids with Clot-Targeting Capabilities from Platelet-Derived Membranes	ACS Applied Materials and Interfaces	https://doi.org/10.1021/acsami.4c12024	2024	Mark Louis P., Vidallon, Mitchell J., Moon, Haikun, Liu, Yuyang, Song, Simon, Crawford, Boon Mian, Teo, James D., McFadyen, Alexis I., Bishop, Rico F., Tabor, Karlheinz, Peter, Xiaowei, Wang	No
A mitochondria-targeted NIR fluorescence/photoacoustic dual-modality probe for highly sensitive and selective imaging of HClO in vivo	Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy	https://doi.org/10.1016/j.saa.2024.125680	2025	Yonghe, Liao, Tingzhuang, Yi, Kangyi, Tan, Xiaoyan, Su, Shuixiu, Chen, Mingyue, Lu, Yanchun, Yang, Xianxian, Huang, Yiheng, Zhao, Hong, Huang, Neng, Jiang, Zhiming, Yan, Changhong, Wei	No
A Mitochondria-Targeted Fluorescence/Photoacoustic Dual-Modality imaging probe for Hypochlorous Acid-Related inflammatory Responses in vivo	Journal of Photochemistry and Photobiology A: Chemistry	https://doi.org/10.1016/j.jphotochem.2024.116232	2025	Yonghe, Liao, Tingzhuang, Yi, Xiaoyan, Su, Shuixiu, Chen, Mingyue, Lu, Xianxian, Huang, Yanchun, Yang, Xiangqing, Qin, Chunli, Tang, Yiheng, Zhao, Hong, Huang, Junjie, Tan, Zhiming, Yan, Neng, Jiang	No
Gas Vesicle-Assisted Ultrasound Imaging for Effective Anti-Tumour CAR-T Cell Immunotherapy Efficacy in Mice Model	International Journal of Nanomedicine	https://doi.org/10.2147/IJN.S508846	2025	Yizhen, Huang, Zhao, Yin, Renhao, Xu, Wenyi, Zheng, Qing, Zhang, Meijun, Zhou, Zhili, Xu, Yanni, He, Shuang, Liu, Hongmei, Liu	No
Development of ultrasound-visualized tumor-targeting engineered bacteria for precise tumor therapy	Synthetic and Systems Biotechnology	https://doi.org/10.1016/j.synbio.2025.03.009	2025	Li, Qu, Zhou, Chi, Zhen Ping, Zou, Ying, Zhou, Bang Ce, Ye	No

Title	Journal	Link	Publication date	References	Top Paper
Antineoplastic activity of a novel tri-specific single chain antibody targeting the hERG1/β1 integrin complex and TRAIL receptors	Molecular Cancer Therapeutics	https://doi.org/10.1158/1535-7163.mct-24-0646	2025	Claudia, Duranti, Jessica, Iorio, Chiara, Capitani, Tiziano, Lottini, Michele, Martinelli, Julia, Roosz, Nicole, Anderle, Tengku Ibrahim, Maulana, Peter M., Loskill, Rossella, Colasurdo, Cesare, Sala, Lara, Magni, Annarosa, Arcangeli	No
L-Arginine-Loaded Gold Nanocages Ameliorate Myocardial Ischemia/Reperfusion Injury by Promoting Nitric Oxide Production and Maintaining Mitochondrial Function	Advanced Science	https://onlinelibrary.wiley.com/doi/10.1002/advs.202302123	2023	Zekun, Wang, Nana, Yang, Yajun, Hou, Yuqing, Li, Chenyang, Yin, Endong, Yang, Huanhuan, Cao, Gaofei, Hu, Jing, Xue, Jialei, Yang, Ziyu, Liao, Weiyun, Wang, Dongdong, Sun, Cundong, Fan, Lemin, Zheng	No
Development of an inhalable contrast agent targeting the respiratory tract mucus layer for pulmonary ultrasonic imaging	Scientific Reports	https://doi.org/10.1038/s41598-024-80933-x	2024	James K., Tsuruta, Patrick R., Sears, Meghan E., Rebuli, Andrew S., Weitz, Phillip G., Durham, Phillip W., Clapp, David B., Hill, Lawrence E., Ostrowski, Paul A., Dayton, Melissa C., Caughey	No
Photodynamic therapy changes tumour immunogenicity and promotes immune-checkpoint blockade response, particularly when combined with micromechanical priming	Scientific Reports	https://doi.org/10.1038/s41598-023-38862-8	2023	Catarina S., Lobo, Maria Inês P., Mendes, Diogo A., Pereira, Lígia C., Gomes-da-Silva, Luis G., Arnaut	No
Photoacoustic molecular imaging for microvascular system in browning adipose tissues	spiedigitallibrary.orgR Chen, S Lixu, T ChenSixteenth International Conference on Photonics and Imaging in, 2023•spiedigitallibrary.org	https://www.spiedigitallibrary.org/conference-proceedings-of-spie/12745/127450L...	2023	R, Chen, S, Lixu, T Chen - on Photonics and Imaging in Biology, ..., Undefined, 2023	No
Longitudinal in Vivo Monitoring of Atheroprogression in Hypercholesterolemic Mice Using Photoacoustic Imaging	Thrombosis and Haemostasis	https://doi.org/10.1055/a-2005-8784	2022	Bartolo, Ferraro, Pierangela, Giustetto, Olga, Schengel, Ludwig T., Weckbach, Lars, Maegdefessel, Oliver, Soehnlein	No
Tetrazine-Derived Near-Infrared Dye for Targeted Photoacoustic Imaging of Bone	Journal of Medicinal Chemistry	https://doi.org/10.1021/acs.jmedchem.2c01685	2023	Rowan, Swann, Samantha, Slikboer, Afaf, Genady, Luis Rafael, Silva, Nancy, Janzen, Amber, Faraday, John F., Valliant, Saman, Sadeghi	No
Tissue factor as a novel diagnostic target for early detection of ovarian cancer using ultrasound microbubbles	Gynecologic Oncology	https://doi.org/10.1016/j.ygyno.2023.04.008	2023	Meghan M., Newcomer, Kalpana Deepa Priya, Dorayappan, Vincent, Wagner, Adrian A., Suarez, Corinne A., Calo, Eileen L., Kalmar, G. Larry, Maxwell, David, O'Malley, David E., Cohn, Michael F., Tweedle, Karuppaiyah, Selvendiran	No
Molecular Ultrasound Imaging Depicts the Modulation of Tumor Angiogenesis by Acetylsalicylic Acid	International Journal of Molecular Sciences	https://doi.org/10.3390/ijms24087060	2023	Flurin, Mueller-Diesing, Wiltrud, Lederle, Anne, Rix, Susanne, Koletnik, Dennis, Doleschel, Maximilian, Snelting, Felix, Gremse, Fabian, Kiessling	No
PH/thermal dual-responsive multifunctional drug delivery system for effective photoacoustic imaging-guided tumor chemo/photothermal therapy	APL Bioengineering	https://doi.org/10.1063/5.0139929	2023	Jun, Wang, Yanyan, Wu, Kai, Liu, Weitao, Yang, Weiwei, Zeng, Xiaolong, Gao, Shiyuan, Liu, Bingbo, Zhang	No

Title	Journal	Link	Publication date	References	Top Paper
Hypoxia-Responsive Aggregation of Gold Nanoparticles for Near-Infrared-II Photoacoustic Imaging-Guided Enhanced Radiotherapy	Langmuir	https://doi.org/10.1021/acs.langmuir.2c03399	2022	Huafeng, Geng, Ke, Chen, Lu, Cao, Luntao, Liu, Yue, Huang, Junbao, Liu	No
Superpixel spectral unmixing framework for the volumetric assessment of tissue chromophores: A photoacoustic data-driven approach	Photoacoustics	https://doi.org/10.1016/j.pacs.2022.100367	2022	Valeria, Grasso, Regine, Willumeit-Römer, Jithin, Jose	No
Biomimetic nanoparticles for effective mild temperature photothermal therapy and multimodal imaging	Journal of Controlled Release	https://doi.org/10.1016/j.jconrel.2022.05.010	2022	Xian, Shu, Yi, Chen, Ping, Yan, Yun, Xiang, Qun Ying, Shi, Tinghui, Yin, Ping, Wang, Li Han, Liu, Xintao, Shuai	No
MnCO3@BSA-ICG nanoparticles as a magnetic resonance/photoacoustic dual-modal contrast agent for functional imaging of acute ischemic stroke	Biochemical and Biophysical Research Communications	https://doi.org/10.1016/j.bbrc.2022.04.143	2022	Guangrong, Song, Baorui, Zhang, Linyan, Song, Wenzhe, Li, Chuxuan, Liu, Leshan, Chen, Aihua, Liu	No
Theranostic nanosystem with supramolecular self-assembly for enhanced reactive oxygen species-mediated apoptosis guided by dual-modality tumor imaging	Pharmacological Research	https://doi.org/10.1016/j.phrs.2022.106241	2022	Dan, Yan, Haili, Zhang, Xiao, Xu, Chunling, Ren, Chao, Han, Zhongrui, Li	No
Polydopamine-coated laponite nanoplatforms for photoacoustic imaging-guided chemo-phototherapy of breast cancer	Nanomaterials	https://doi.org/10.3390/nano11020394	2021	Renna, Liu, Fanli, Xu, Lu, Wang, Mengxue, Liu, Xueyan, Cao, Xiangyang, Shi, Rui, Guo	No
Tumor Microenvironment-Responsive Yolk-Shell NaCl@Virus-Inspired Tetrasulfide-Organosilica for Ion-Interference Therapy via Osmolarity Surge and Oxidative Stress Amplification	ACS Nano	https://doi.org/10.1021/acsnano.1c09496	2021	Yang, Li, Jinyan, Lin, Peiyuan, Wang, Fukai, Zhu, Ming, Wu, Qiang, Luo, Yun, Zhang, Xiaolong, Liu	No
Achieving Effective Multimodal Imaging with Rare-Earth Ion-Doped CaF2 Nanoparticles	Pharmaceutics	https://doi.org/10.3390/pharmaceutics14040840	2022	Zhenfeng, Yu, Yuanyuan, He, Timo, Schomann, Kefan, Wu, Yang, Hao, Ernst, Suidgeest, Hong, Zhang, Christina, Eich, Luis J., Cruz	No
Multifunctional Nanoparticles Co-Loaded with Perfluoropropane, Indocyanine Green, and Methotrexate for Enhanced Multimodal Imaging of Collagen-Induced Arthritis	Molecular Pharmaceutics	https://doi.org/10.1021/acs.molpharmaceut.2c00174	2022	Xinyu, He, Huanhuan, Chen, Shufang, Chang, Shenyin, Zhu	No
Photoacoustic Enhancement of Ferricyanide-Treated Silver Chalcogenide-Coated Gold Nanorods	Journal of Physical Chemistry C	https://doi.org/10.1021/acs.jpcc.2c01727	2022	Yash, Mantri, Izaac, Sit, Jiajing, Zhou, Vicki H., Grassian, Jesse V., Jokerst	No
Enzyme-Engineered Conjugated Polymer Nanoplatform for Activatable Companion Diagnostics and Multistage Augmented Synergistic Therapy	Advanced Materials	https://doi.org/10.1002/adma.202200062	2022	Jiayingzi, Wu, Yafei, Zhang, Kejia, Jiang, Xiaoyu, Wang, Nicholas Thomas, Blum, Jing, Zhang, Shanshan, Jiang, Jing, Lin, Peng, Huang	No
Preventing Metastasis Using Gold Nanorod-Assisted Plasmonic Photothermal Therapy in Xenograft Mice	Bioconjugate Chemistry	https://doi.org/10.1021/acs.bioconjchem.2c00011	2022	Moustafa R.K., Ali, Paige E., Warner, Anthony M., Yu, Ming, Tong, Tiegang, Han, Yan, Tang	No
Cu-Doped black phosphorus quantum dots as multifunctional Fenton nanocatalyst for boosting synergistically enhanced H2O2-guided and photothermal chemodynamic cancer therapy	Nanoscale	https://doi.org/10.1039/d1nr07434b	2022	Haimei, Li, Yaofa, Liu, Shulan, Li, Silong, Zhang, Biao, Huang, Ran, Cui, Yi, Liu, Peng, Jiang	No
Bioactive NIR-II Light-Responsive Shape Memory Composite Based on Cuprorivaite Nanosheets for Endometrial Regeneration	Advanced Science	https://doi.org/10.1002/advs.202102220	2022	Chenle, Dong, Chen, Yang, Muhammad Rizwan, Younis, Jing, Zhang, Gang, He, Xingdi, Qiu, Lian Hua, Fu, Dong Yang, Zhang, Hao, Wang, Wenli, Hong, Jing, Lin, Xueqing, Wu, Peng, Huang	No

Title	Journal	Link	Publication date	References	Top Paper
A microenvironment-responsive FePt probes for imaging-guided Fenton-enhanced radiotherapy of hepatocellular carcinoma	Journal of Nanobiotechnology	https://doi.org/10.1186/s12951-022-01305-z	2022	Xingyang, Zhao, Xiang, Sun, Wenchao, Huang, Ronghe, Chen, Kang, Chen, Liming, Nie, Chihua, Fang	No
One-Step Supramolecular Multifunctional Coating on Plant Virus Nanoparticles for Bioimaging and Therapeutic Applications	ACS Applied Materials and Interfaces	https://doi.org/10.1021/acsami.1c22690	2022	Zhuohong, Wu, Jiajing, Zhou, Christian Isalomboto, Nkanga, Zhicheng, Jin, Tengyu, He, Raina M., Borum, Wonjun, Yim, Jingcheng, Zhou, Yong, Cheng, Ming, Xu, Nicole F., Steinmetz, Jesse V., Jokerst	No
3D Ultrasound-Guided Photoacoustic Imaging to Monitor the Effects of Suboptimal Tyrosine Kinase Inhibitor Therapy in Pancreatic Tumors	Frontiers in Oncology	https://doi.org/10.3389/fonc.2022.915319	2022	Abigail, Claus, Allison, Sweeney, Deeksha M., Sankepalle, Brian, Li, Daniel, Wong, Marvin, Xavierselvan, Srivalleesha, Mallidi	No
DNA-assembled visible nanodandelions with explosive hydrogen-bond breakage achieving uniform intra-tumor distribution (UITD)-guided photothermal therapy	Biomaterials	https://doi.org/10.1016/j.biomaterials.2022.121381	2022	Yongming, Zhang, Yanna, Cui, Mingwang, Li, Kai, Cui, Ruike, Li, Wenhui, Xie, Liu, Liu, Zeyu, Xiao	No
DNA-Templated ultrasmall bismuth sulfide nanoparticles for photoacoustic imaging of myocardial infarction	Journal of Colloid and Interface Science	https://doi.org/10.1016/j.jcis.2022.01.194	2022	Peng, Zhao, Bing, Li, Yingxu, Li, Leshan, Chen, Hao, Wang, Ling, Ye	No
In vivo imaging of nanoparticle-labeled CAR T cells	Proceedings of the National Academy of Sciences of the United States of America	https://doi.org/10.1073/pnas.2102363119	2022	Louise, Kiru, Aimen, Zlitni, Aidan Michael, Tousley, Guillermo Nicolás, Dalton, Wei, Wu, Famyrah, Lafortune, Anna, Liu, Kristen May, Cunanan, Hossein, Nejadnik, Todd, Sulchek, Michael Eugene, Moseley, Robbie G., Majzner, Heike Elisabeth, Daldrup-Link	No
Tailoring a Near-Infrared Macrocyclization Scaffold Allows the Control of In Situ Self-Assembly for Photoacoustic/PET Bimodal Imaging	Angewandte Chemie - International Edition	https://doi.org/10.1002/anie.202200369	2022	Yuqi, Wang, He, Bai, Yinxing, Miao, Jianhui, Weng, Zheng, Huang, Jiayu, Fu, Yan, Zhang, Jianguo, Lin, Deju, Ye	No
Multimodal Contrast Agent Enabling pH Sensing Based on Organically Functionalized Gold Nanoshells with Mn-Zn Ferrite Cores	Nanomaterials	https://doi.org/10.3390/nano12030428	2022	Duong Thuy, Bui, Radim, Havelek, Karel, Královec, Lenka, Kubíčková, Jarmila, Kuličková, Petr, Matouš, Vít, Herynek, Jaroslav, Kupčík, Darina, Muthná, Pavel, Řezanka, Ondřej, Kaman	No
The Incorporation of Etanercept into a Porous Tri-Layer Scaffold for Restoring and Repairing Cartilage Tissue	Pharmaceutics	https://doi.org/10.3390/pharmaceutics14020282	2022	Yaima, Campos, Gastón, Fuentes, Amisel, Almirall, Ivo, Que, Timo, Schomann, Chih Kit, Chung, Carla, Jorquera-Cordero, Luis, Quintanilla, José C., Rodríguez-Cabello, Alan, Chan, Luis J., Cruz	No
Theranostic Nanoplatform with Sequential SDT and ADV Effects in Response to Well-Programmed LIFU Irradiation for Cervical Cancer	International Journal of Nanomedicine	https://doi.org/10.2147/IJN.S339257	2021	Jun, Zhou, Jingxin, Hou, Shuling, Liu, Jie, Xu, Ying, Luo, Jun, Zheng, Xin, Li, Zhigang, Wang, Haitao, Ran, Dajing, Guo	No

Title	Journal	Link	Publication date	References	Top Paper
Multifunctional Polymeric Nanoparticles for Chemo/Phototheranostics of Retinoblastoma	ACS Biomaterials Science and Engineering	https://doi.org/10.1021/acsbiomaterials.1c01234	2022	Sushma Venkata, Mudigunda, Deepak B., Pemmaraju, Shivangi, Paradkar, Eswara Rao, Puppala, Basveshwar, Gawali, Suryanarayana Murty, Upadhyayula, Naidu, Vegi Gangamodi, Aravind Kumar, Rengan	No
A Class of Biocompatible Dye-Protein Complex Optical Nanoprobes	ACS Nano	https://doi.org/10.1021/acsnano.1c06536	2022	Xindong, Wang, Xinyu, Wang, Bo, Qu, Nuernisha, Alifu, Ji, Qi, Ruiyuan, Liu, Qinrui, Fu, Ruifang, Shen, Qi, Xia, Lijun, Wu, Bing, Sun, Jibin, Song, Youping, Lin, Xin, Huang, Anjun, Qin, Jun, Qian, Ben Zhong, Tang, Guanying, Chen	No
A core-shell Au@Cu2-xSe heterogeneous metal nanocomposite for photoacoustic and computed tomography dual-imaging-guided photothermal boosted chemodynamic therapy	Journal of Nanobiotechnology	https://doi.org/10.1186/s12951-021-01159-x	2021	Le, Zhang, Chunjuan, Jiang, Bing, Li, Zhengwang, Liu, Bingxin, Gu, Simin, He, Panli, Li, Yun, Sun, Shaoli, Song	No
Natural Killer Cell Membrane-Cloaked Virus-Mimicking Nanogenerator with NIR-Triggered Shape Reversal and •C/•OH Storm for Synergistic Thermodynamic–Chemodynamic Therapy	Advanced Science	https://doi.org/10.1002/advs.202103498	2022	Jinyan, Lin, Yang, Li, Peiyuan, Wang, Ming, Wu, Fukai, Zhu, Yun, Zhang, Zhenqing, Hou, Jingfeng, Liu, Xiaolong, Liu	No
A novel targeted multifunctional nanoplatform for visual chemo-hyperthermia synergy therapy on metastatic lymph nodes via lymphatic delivery	Journal of Nanobiotechnology	https://doi.org/10.1186/s12951-021-01186-8	2021	Weiwei, Liu, Xiaoping, Ye, Lingyun, He, Juan, Cheng, Wenpei, Luo, Min, Zheng, Yaqin, Hu, Wei, Zhang, Yang, Cao, Haitao, Ran, Lu, Yang	No
Expression and purification of a native Thy1-single-chain variable fragment for use in molecular imaging	Scientific Reports	https://doi.org/10.1038/s41598-021-02445-2	2021	Natacha, Jugniot, Rakesh, Bam, Ramasamy, Paulmurugan	No
Acidic TME-Responsive Nano-Bi 2 Se 3 @ MnCaP as a NIR- II-Triggered Free Radical Generator for Hypoxia-Irrelevant Phototherapy with High Specificity and Immunogenicity	Small	https://doi.org/10.1002/smll.202104302	2021	Yongcan, Li, Honglian, Yu, Junjie, Ren, Guangjie, Lu, Yang, Cao, Zhigang, Xu, Yuejun, Kang	No
Detection and Characterization of Sentinel Lymph Node by Ultrasound Molecular Imaging with B7 - H3 - Targeted Microbubbles in Orthotopic Breast Cancer Model in Mice	Molecular Imaging and Biology	https://doi.org/10.1007/s11307-021-01680-3	2022	Zhongqian, Hu, Sunitha V, Bachawal, Xuelin, Li, Huaijun, Wang, Katheryne E, Wilson, Pan, Li, Ramasamy, Paulmurugan	No
A bioorthogonal methylene blue derived probe for targeted photoacoustic imaging	European Journal of Medicinal Chemistry Reports	https://doi.org/10.1016/j.ejmcr.2021.100021	2022	Afaf R., Genady, Samantha R., Slikboer, Rowan, Swann, Kevin, Wyszatko, Nancy, Janzen, Luis Rafael, Silva, Mohamed E., El-Zaria, Saman, Sadeghi, John F., Valliant	No
Carrier-free nanoparticles of camptothecin prodrug for chemo-photothermal therapy: the making, in vitro and in vivo testing	Journal of Nanobiotechnology	https://doi.org/10.1186/s12951-021-01093-y	2021	Mingtao, Ao, Fei, Yu, Yixiang, Li, Mengya, Zhong, Yonghe, Tang, Hua, Yang, Xiaojing, Wu, Yifan, Zhuang, Huiyun, Wang, Xiaolian, Sun, Xuehui, Hong, Xiao Dong, Chen	No

Title	Journal	Link	Publication date	References	Top Paper
Ultrasound (US)-activated redox dyshomeostasis therapy reinforced by immunogenic cell death (ICD) through a mitochondrial targeting liposomal nanosystem	Theranostics	https://doi.org/10.7150/THNO.62984	2021	Junjie, Ren, Jing, Zhou, Han, Liu, Xiaodan, Jiao, Yang, Cao, Zhigang, Xu, Yuejun, Kang, Peng, Xue	No
Gold nanoparticles conjugated with DNA aptamer for photoacoustic detection of human matrix metalloproteinase-9	Photoacoustics	https://doi.org/10.1016/j.pacs.2021.100307	2022	Jinhwan, Kim, Anthony M., Yu, Kelsey P., Kubelick, Stanislav Y., Emelianov	No
iRGD Peptide-Mediated Liposomal Nanoparticles with Photoacoustic/Ultrasound Dual-Modality Imaging for Precision Theranostics Against Hepatocellular Carcinoma	International journal of nanomedicine	https://doi.org/10.2147/IJN.S325891	2021	Huipu, Li, Shasha, Shi, Meng, Wu, Wei, Shen, Jianli, Ren, Zhechuan, Mei, Haitao, Ran, Zhigang, Wang, Yi, Tian, Jian, Gao, Hongyun, Zhao	No
Ultrasmall gold nanorod-polydopamine hybrids for enhanced photoacoustic imaging and photothermal therapy in second near-infrared window	Nanotheranostics	https://doi.org/10.7150/ntno.63634	2022	Wonjun, Yim, Raina M., Borum, Jiajing, Zhou, Yash, Mantri, Zhuohong, Wu, Jingcheng, Zhou, Zhicheng, Jin, Matthew, Creyer, Jesse V., Jokerst	No
PEGylated Indium Nanoparticles: A Metallic Contrast Agent for Multiwavelength Photoacoustic Imaging and Second Near-Infrared Photothermal Therapy	ACS Applied Materials and Interfaces	https://doi.org/10.1021/acsami.1c13578	2021	Yu, Chen, Haitao, Wu, Hu, Zhou, Zhaohua, Miao, Fengqiu, Hong, Qingliang, Zhao, Zhenchao, Tao, Yan, Ma, Weidong, Zhao, Zhengbao, Zha	No
Xenon Nanobubbles for the Image-Guided Preemptive Treatment of Acute Ischemic Stroke via Neuroprotection and Microcirculatory Restoration	ACS Applied Materials and Interfaces	https://doi.org/10.1021/acsami.1c06014	2021	Juan, Jin, Mei, Li, Jing, Li, Bin, Li, Lei, Duan, Fang, Yang, Ning, Gu	No
Intracellular vesicle entrapment of nanobubble ultrasound contrast agents targeted to PSMA promotes prolonged enhancement and stability in vivo and in vitro	Nanotheranostics	https://doi.org/10.7150/ntno.64735	2022	Reshani H., Perera, Eric, Abenojar, Pinunta, Nittayacharn, Xinning, Wang, Gopal, Ramamurthy, Pubudu, Peiris, Ilya, Bederman, James P., Basilion, Agata A., Exner	No
Prussian blue-based theranostics for ameliorating acute kidney injury	Journal of Nanobiotechnology	https://doi.org/10.1186/s12951-021-01006-z	2021	Dong Yang, Zhang, Hengke, Liu, Kathy S., Zhu, Ting, He, Muhammad Rizwan, Younis, Chen, Yang, Shan, Lei, Jiayingzi, Wu, Jing, Lin, Junle, Qu, Peng, Huang	No
Early Detection and Reversal of Cell Apoptosis Induced by Focused Ultrasound-Mediated Blood-Brain Barrier Opening	ACS Nano	https://doi.org/10.1021/acsnano.1c04029	2021	Jieqiong, Wang, Liting, Xie, Yu, Shi, Lijuan, Ao, Feiyan, Cai, Fei, Yan	No
Photoacoustic image-guided corpus cavernosum intratunical injection of adipose stem cell-derived exosomes loaded polydopamine thermosensitive hydrogel for erectile dysfunction treatment	Bioactive Materials	https://doi.org/10.1016/j.bioactmat.2021.07.024	2021	Li, Liang, Yi, Shen, Zhifeng, Dong, Xin, Gu	No
Mn(II)-directed dual-photosensitizers co-assemblies for multimodal imaging-guided self-enhanced phototherapy	Materials Science and Engineering C	https://doi.org/10.1016/j.msec.2021.112351	2021	Jinxue, Liu, Wenbao, Zuo, Quanyi, Jin, Chen, Liu, Nian, Liu, Haina, Tian, Xuan, Zhu	No
Multifunctional nanozyme for multimodal imaging-guided enhanced sonodynamic therapy by regulating the tumor microenvironment	Nanoscale	https://doi.org/10.1039/d1nr01449h	2021	Shuling, Liu, Wei, Zhang, Qiaoqi, Chen, Jingxin, Hou, Junrui, Wang, Yixin, Zhong, Xingyue, Wang, Weixi, Jiang, Haitao, Ran, Dajing, Guo	No
Nerve Growth Factor-Targeted Molecular Theranostics Based on Molybdenum Disulfide Nanosheet-Coated Gold Nanorods (MoS2-AuNR) for Osteoarthritis Pain	ACS Nano	https://doi.org/10.1021/acsnano.1c02454	2021	Man Ting, Au, Jingyu, Shi, Yadi, Fan, Junguo, Ni, Chunyi, Wen, Mo, Yang	No

Title	Journal	Link	Publication date	References	Top Paper
Role of dextran in stabilization of polypyrrole nanoparticles for photoacoustic imaging	European Polymer Journal	https://doi.org/10.1016/j.eurpolymj.2021.110634	2021	Monika, Paúrová, Oumayma, Taboubi, Ivana, Šeděnková, Jiřina, Hromádková, Petr, Matouš, Vít, Herynek, Luděk, Šefc, Michal, Babič	No
Theragnostic glycol chitosan-conjugated gold nanoparticles for photoacoustic imaging of regional lymph nodes and delivering tumor antigen to lymph nodes	Nanomaterials	https://doi.org/10.3390/nano11071700	2021	In Cheol, Sun, Seonghoon, Jo, Diego, Dumani, Wan Su, Yun, Hong Yeol, Yoon, Dong Kwon, Lim, Cheol Hee, Ahn, Stanislav, Emelianov, Kwangmeyung, Kim	No
Ultraselective Carbon Nanotubes for Photoacoustic Imaging of Inflamed Atherosclerotic Plaques	Advanced Functional Materials	https://onlinelibrary.wiley.com/doi/10.1002/adfm.202101005	2021	Mahsa, Gifani, Devon J., Eddins, Hisanori, Kosuge, Yapei, Zhang, Sesha L. A., Paluri, Timothy, Larson, Nicholas, Leeper, Leonore A., Herzenberg, Sanjiv Sam, Gambhir, Michael V., McConnell, Eliver E. B., Ghosn, Bryan Ronain, Smith	No
Targeted Micellar Phthalocyanine for Lymph Node Metastasis Homing and Photothermal Therapy in an Orthotopic Colorectal Tumor Model	Nano-Micro Letters	https://doi.org/10.1007/s40820-021-00666-8	2021	Hai Yi, Feng, Yihang, Yuan, Yunpeng, Zhang, Hai Jun, Liu, Xiao, Dong, Si Cong, Yang, Xue Liang, Liu, Xing, Lai, Mao Hua, Zhu, Jue, Wang, Qin, Lu, Quanjun, Lin, Hong Zhuan, Chen, Jonathan F., Lovell, Peng, Sun, Chao, Fang	No
Automatic threshold selection algorithm to distinguish a tissue chromophore from the background in photoacoustic imaging	Biomedical Optics Express	https://doi.org/10.1364/boe.422170	2021	Azin, Khodaverdi, Tobias, Erlöv, Jenny, Hult, Nina, Reistad, Agnes, Pekar-Lukacs, John, Albinsson, Aboma, Merdasa, Rafi, Sheikh, Malin, Malmsjö, Magnus, Cinthio	No
Photoacoustic imaging for the monitoring of local changes in oxygen saturation following an adrenaline injection in human forearm skin	Biomedical Optics Express	https://doi.org/10.1364/boe.423876	2021	Josefine, Bunke, Aboma, Merdasa, Rafi, Sheikh, John, Albinsson, Tobias, Erlöv, Bodil, Gesslein, Magnus, Cinthio, Nina, Reistad, Malin, Malmsjö	No
Near-Infrared Heptamethine Cyanine Dyes for Nanoparticle-Based Photoacoustic Imaging and Photothermal Therapy	Journal of Medicinal Chemistry	https://doi.org/10.1021/acs.jmedchem.1c00771	2021	Anna, St. Lorenz, Emmanuel Ramsey, Buabeng, Oleh, Taratula, Olena, Taratula, Maged, Henary	No
Comparison of photoacoustic imaging and histopathological examination in determining the dimensions of 52 human melanomas and nevi ex vivo	Biomedical Optics Express	https://opg.optica.org/abstract.cfm?URI=boe-12-7-4097	2021	Jenny, Hult, Aboma, Merdasa, Agnes, Pekar-Lukacs, Magne, Tordengren Stridh, Azin, Khodaverdi, John, Albinsson, Bodil, Gesslein, Ulf, Dahlstrand, Linn, Engqvist, Yousef, Hamid, Douglas, Larsson Albèr, Bertil, Persson, Tobias, Erlöv, Rafi, Sheikh, Magnus, Cinthio, Malin, Malmsjö	No
NIR-II Photoacoustic Reporter for Biopsy-Free and Real-Time Assessment of Wilson's Disease	Small	https://doi.org/10.1002/smll.202008061	2021	Qinrui, Fu, Jiamin, Ye, Juejun, Wang, Naishun, Liao, Hongjuan, Feng, Lichao, Su, Xiaoguang, Ge, Huanghao, Yang, Jibin, Song	No

Title	Journal	Link	Publication date	References	Top Paper
Activatable Carbocyanine Dimers for Photoacoustic and Fluorescent Detection of Protease Activity	ACS Sensors	https://doi.org/10.1021/acssensors.1c00518	2021	Colman, Moore, Raina M., Borum, Yash, Mantri, Ming, Xu, Pavla, Fajtová, Anthony J., O'Donoghue, Jesse V., Jokerst	No
Low-dose X-ray enhanced tumor accumulation of theranostic nanoparticles for high-performance bimodal imaging-guided photothermal therapy	Journal of Nanobiotechnology	https://doi.org/10.1186/s12951-021-00875-8	2021	Qiaolin, Wei, Jian, He, Shuaifei, Wang, Shiyuan, Hua, Yuchen, Qi, Fangyuan, Li, Daishun, Ling, Min, Zhou	No
Molecular magnetic resonance imaging of Alpha-v-Beta-3 integrin expression in tumors with ultrasound microbubbles	Biomaterials	https://doi.org/10.1016/j.biomaterials.2021.120896	2021	Vertika, Pathak, Teresa, Nolte, Elena, Rama, Anne, Rix, Seyed Mohammadali, Dadfar, Vera, Paefgen, Srinivas, Banala, Eva Miriam, Buhl, Marek, Weiler, Volkmar, Schulz, Twan, Lammers, Fabian, Kiessling	No
Dual mitigation of immunosuppression combined with photothermal inhibition for highly effective primary tumor and metastases therapy	Biomaterials	https://doi.org/10.1016/j.biomaterials.2021.120856	2021	Ju, Huang, Liang, Zhang, Weichen, Zhou, Jingxue, Wang, Ruo, Zhang, Zhigang, Wang, Haitao, Ran, Pan, Li, Rui, Li	No
ROS-responsive liposomes with NIR light-triggered doxorubicin release for combinatorial therapy of breast cancer	Journal of Nanobiotechnology	https://doi.org/10.1186/s12951-021-00877-6	2021	Hanxi, Yi, Wangxing, Lu, Fan, Liu, Guoqing, Zhang, Feifan, Xie, Wenjie, Liu, Lei, Wang, Wenhu, Zhou, Zeneng, Cheng	No
Dual-Stimuli-Responsive Nanotheranostics for Dual-Targeting Photothermal-Enhanced Chemotherapy of Tumor	ACS Applied Materials & Interfaces	https://pubs.acs.org/doi/10.1021/acsami.1c03211	2021	Ting, He, Jin, He, Muhammad Rizwan, Younis, Nicholas Thomas, Blum, Shan, Lei, Yinling, Zhang, Peng, Huang, Jing, Lin	No
Contrast-enhanced ultrasound molecular imaging of activated platelets in the progression of atherosclerosis using microbubbles bearing the von Willebrand factor A1 domain	Experimental and Therapeutic Medicine	http://www.spandidos-publications.com/10.3892/etm.2021.10153	2021	Jie, Tian, Yahui, Weng, Ruiying, Sun, Ying, Zhu, Jun, Zhang, Hongyun, Liu, Yani, Liu	No
Tailored theranostic nanoparticles cause efficient ferroptosis in head and neck squamous cell carcinoma through a reactive oxygen species "butterfly effect"	Chemical Engineering Journal	https://doi.org/10.1016/j.cej.2021.130083	2021	Xiangkai, Zhang, Shengbing, Yang, Qing, Wang, Weimin, Ye, Shuli, Liu, Xiao, Wang, Zhiyuan, Zhang, Lingyan, Cao, Xinquan, Jiang	No
Bursting microbubbles: How nanobubble contrast agents can enable the future of medical ultrasound molecular imaging and image-guided therapy	Current Opinion in Colloid & Interface Science	https://doi.org/10.1016/j.cocis.2021.101463	2021	Agata A., Exner, Michael C., Kolios	No
Therapeutic oxygen delivery by perfluorocarbon-based colloids	Advances in Colloid and Interface Science	https://doi.org/10.1016/j.cis.2021.102407	2021	Marie Pierre, Krafft, Jean G., Riess	No
A metal protoporphyrin-induced nano-self-assembly for potentiating photothermal therapy by depleting antioxidant defense systems	Chemical Engineering Journal	https://doi.org/10.1016/j.cej.2021.129769	2021	Huizhu, Yu, Ming, Ma, Liping, Jiang, Jie, Shen, Fengfeng, Xue, Hangrong, Chen	No
Tuning band gap of MnO2 nanoflowers by Alkali metal doping for enhanced Ferroptosis/phototherapy synergism in Cancer	Applied Materials Today	https://doi.org/10.1016/j.apmt.2021.101027	2021	Xin, Liu, Baiyan, Sui, Pedro H.C., Camargo, Jiale, Wang, Jiao, Sun	No
Construction of Smart Nanotheranostic Platform Bi-Ag@PVP: Multimodal CT/PA Imaging-Guided PDT/PTT for Cancer Therapy	ACS Omega	https://doi.org/10.1021/acsomega.1c00225	2021	Zonglang, Zhou, Jun, Xie, Sihan, Ma, Xian, Luo, Jiajing, Liu, Shengyu, Wang, Yuqiang, Chen, Jianghua, Yan, Fanghong, Luo	No

Title	Journal	Link	Publication date	References	Top Paper
Gold Nanorod-Melanin Hybrids for Enhanced and Prolonged Photoacoustic Imaging in the Near-Infrared-II Window	ACS Applied Materials and Interfaces	https://doi.org/10.1021/acsami.1c00993	2021	Wonjun, Yim, Jiajing, Zhou, Yash, Mantri, Matthew N., Creyer, Colman A., Moore, Jesse V., Jokerst	No
Oxygen and oxaliplatin-loaded nanoparticles combined with photo-sonodynamic inducing enhanced immunogenic cell death in syngeneic mouse models of ovarian cancer	Journal of Controlled Release	https://doi.org/10.1016/j.jconrel.2021.02.032	2021	Jiao, Zheng, Jiangchuan, Sun, Jia, Chen, Shenyin, Zhu, Shuning, Chen, Yujiao, Liu, Lan, Hao, Zhigang, Wang, Shufang, Chang	No
PH-triggered poly(ethylene glycol)-poly(lactic acid/glycolic acid)/ croconaine nanoparticles-assisted multiplexed photoacoustic imaging and enhanced photothermal cancer therapy	ACS Applied Bio Materials	https://doi.org/10.1021/acsabm.0c01578	2021	Shiying, Li, Kwok Ho, Lui, Xin, Li, Xueyang, Fang, Wai Sum, Lo, Yan Juan, Gu, Wing Tak, Wong	No
Hollow Mesoporous Silica Nanoparticles Gated by Chitosan-Copper Sulfide Composites as Theranostic Agents for the Treatment of Breast Cancer	Acta Biomaterialia	https://doi.org/10.1016/j.actbio.2021.03.024	2021	Shiwei, Niu, Xuejing, Zhang, Gareth R., Williams, Jianrong, Wu, Feng, Gao, Zi, Fu, Xia, Chen, Sheng, Lu, Li Min, Zhu	No
Photoacoustic imaging of myocardial infarction region using non-invasive fibrin-targeted nanoparticles in a rat myocardial ischemia-reperfusion model	International Journal of Nanomedicine	https://doi.org/10.2147/IJN.S293736	2021	Yanan, Zhang, Xiajing, Chen, Lingjuan, Liu, Jie, Tian, Lan, Hao, Hai Tao, Ran	No
Development of an embedded multimodality imaging platform for onco-pharmacology using a smart anticancer prodrug as an example	Scientific Reports	https://doi.org/10.1038/s41598-020-59561-8	2020	Florian, Raes, Serigne Moussa, Badiane, Brigitte, Renoux, Sébastien, Papot, Stéphanie, Lerondel, Alain, Le Pape	No
One-step synthesis of multifunctional nanoparticles for CT/PA imaging guided breast cancer photothermal therapy	Colloids and Surfaces B: Biointerfaces	https://doi.org/10.1016/j.colsurfb.2021.111630	2021	Liwen, Fu, Shuguang, Yang, Shichao, Jiang, Xiaojun, Zhou, Zhou, Sha, Chuanglong, He	No
A multimodal molecular imaging approach targeting urokinase plasminogen activator receptor for the diagnosis, resection and surveillance of urothelial cell carcinoma	European Journal of Cancer	https://doi.org/10.1016/j.ejca.2021.01.001	2021	Victor M., Baart, Geertje, van der Horst, Marion M., Deken, Shadhvi S., Bhairosingh, Timo, Schomann, Vincent Q., Sier, Maaike H., van der Mark, Luisa, Iamele, Hugo, de Jonge, Massimo, Resnati, Andrew P., Mazar, Rob C.M., Pelger, Gabriel, van der Pluijm, Peter J.K., Kuppen, Alexander L., Vahrmeijer, Cornelis F.M., Sier	No
An application of multivariate data analysis to photoacoustic imaging for the spectral unmixing of gold nanorods in biological tissues	Nanomaterials	https://doi.org/10.3390/nano11010142	2021	Mirko, Maturi, Paolo, Armanetti, Luca, Menichetti, Mauro Comes, Franchini	No
Tumor microenvironments self-activated nanoscale metal organic frameworks for ferroptosis based cancer chemodynamic/photothermal/chemo therapy	Acta Pharmaceutica Sinica B	https://doi.org/10.1016/j.apsb.2021.01.016	2021	Yu, Liang, Li, Zhang, Chao, Peng, Shiyu, Zhang, Siwen, Chen, Xin, Qian, Wanxian, Luo, Qing, Dan, Yongyan, Ren, Yingjia, Li, Bingxia, Zhao	No
Gold nanoparticle-based nanoprobes with enhanced tumor targeting and photothermal/photodynamic response for therapy of osteosarcoma	Nanotechnology	https://doi.org/10.1088/1361-6528/abd816	2021	Shengren, Xiong, Guosheng, Xiong, Zhaohui, Li, Qing, Jiang, Jia, Yin, Ting, Yin, Hong, Zheng	No

Title	Journal	Link	Publication date	References	Top Paper
Visualized podocyte-targeting and focused ultrasound responsive glucocorticoid nano-delivery system against immune-associated nephropathy without glucocorticoid side effect	Theranostics	https://doi.org/10.7150/THNO.53083	2021	Kui, Fan, Li, Zeng, Jing, Guo, Shuqin, Xie, Yuan, Yu, Jianwei, Chen, Jin, Cao, Qinyanqiu, Xiang, Siliang, Zhang, Yuanli, Luo, Qingyue, Deng, Qin, Zhou, Yan, Zhao, Lan, Hao, Zhigang, Wang, Ling, Zhong	No
Multifunctional nanoparticles as theranostic agents for therapy and imaging of breast cancer	Journal of Photochemistry and Photobiology B: Biology	https://doi.org/10.1016/j.jphotobiol.2020.112110	2020	Donald A., Fernandes, Dennis D., Fernandes, Aimen, Malik, Gregory-Neal W., Gomes, Sila, Appak-Baskoy, Elizabeth, Berndl, Claudiu C., Gradinaru, Michael C., Kolios	No
Enhanced Antitumoral Activity and Photoacoustic Imaging Properties of AuNP-Enriched Endothelial Colony Forming Cells on Melanoma	Advanced Science	https://doi.org/10.1002/advs.202001175	2020	Paolo, Armanetti, Anastasia, Chillà, Francesca, Margheri, Alessio, Biagioni, Luca, Menichetti, Giancarlo, Margheri, Fulvio, Ratto, Sonia, Centi, Francesca, Bianchini, Mirko, Severi, Rita, Traversi, Daniele, Bani, Matteo, Lulli, Tommaso, Del Rosso, Alessandra, Mocali, Elisabetta, Rovida, Mario, Del Rosso, Gabriella, Fibbi, Anna, Laurenzana	No
Ultrasound molecular imaging of atherosclerosis for early diagnosis and therapeutic evaluation through leucocyte-like multiple targeted microbubbles	Theranostics	https://doi.org/10.7150/thno.22070	2018	Fei, Yan, Yu, Sun, Yang, Mao, Meiying, Wu, Zhiting, Deng, Shuai, Li, Xin, Liu, Li, Xue, Hairong, Zheng	No
Multifunctional nanotheranostic gold nanocage/ selenium core-shell for pai-guided chemo-photothermal synergistic therapy in vivo	International Journal of Nanomedicine	https://doi.org/10.2147/IJN.S275846	2020	Xueyang, Fang, Kwok Ho, Lui, Shiying, Li, Wai Sum, Lo, Xin, Li, Yanjuan, Gu, Wing Tak, Wong	No
Biomimetic Anti-PD-1 Peptide-Loaded 2D FePSe 3 Nanosheets for Efficient Photothermal and Enhanced Immune Therapy with Multimodal MR/PA/Thermal Imaging	Advanced Science	https://onlinelibrary.wiley.com/doi/10.1002/advs.202003041	2021	Xueyang, Fang, Xianlin, Wu, Zhendong, Li, Lijun, Jiang, Wai-Sum, Lo, Guanmao, Chen, Yanjuan, Gu, Wing-Tak, Wong	No
Multimodal Imaging of Pancreatic Ductal Adenocarcinoma Using Multifunctional Nanoparticles as Contrast Agents	ACS Applied Materials and Interfaces	https://doi.org/10.1021/acsami.0c15430	2020	Ying, Zhao, Fei, Ye, Torkel B., Brismar, Xuan, Li, Rui, He, Rainer, Heuchel, Ramy, El-Sayed, Neus, Feliu, Wenyi, Zheng, Sandra, Oerther, Joydeep, Dutta, Wolfgang J., Parak, Mamoun, Muhammed, Moustapha, Hassan	No
Multifunctional tumor-targeted PLGA nanoparticles delivering Pt(IV)/siBIRC5 for US/MRI imaging and overcoming ovarian cancer resistance	Biomaterials	https://doi.org/10.1016/j.biomaterials.2020.120478	2020	Yanhua, Zhang, Yang, Dong, Hao, Fu, Hui, Huang, Zhihua, Wu, Meng, Zhao, Xupeng, Yang, Qianqian, Guo, Yourong, Duan, Ying, Sun	No
Photoacoustic and magnetic resonance imaging of hybrid manganese dioxide-coated ultra-small NaGdF4 nanoparticles for spatiotemporal modulation of hypoxia in head and neck cancer	Cancers	https://doi.org/10.3390/cancers12113294	2020	Laurie J., Rich, Jossana A., Damasco, Julia C., Bulmahn, Hilliard L., Kutscher, Paras N., Prasad, Mukund, Seshadri	No

Title	Journal	Link	Publication date	References	Top Paper
Comparison of photoacoustic and fluorescence tomography for the in vivo imaging of ICG-labelled liposomes in the medullary cavity in mice	Photoacoustics	https://linkinghub.elsevier.com/retrieve/pii/S2213597920300501	2020	Jana, Humbert, Olga, Will, Tuula, Peñate-Medina, Oula, Peñate-Medina, Olav, Jansen, Marcus, Both, Claus-Christian, Glüer	No
Targeted theranostics of lung cancer: PD-L1-guided delivery of gold nanoprisms with chlorin e6 for enhanced imaging and photothermal/photodynamic therapy	Acta Biomaterialia	https://doi.org/10.1016/j.actbio.2020.09.040	2020	Bin, Liu, Guanglei, Qiao, Yu, Han, E., Shen, Gabriel, Alfranca, Haisong, Tan, Lirui, Wang, Shaojun, Pan, Lijun, Ma, Wujun, Xiong, Yanlei, Liu, Daxiang, Cui	No
Opto-acoustic synergistic irradiation for vaporization of natural melanin-cored nanodroplets at safe energy levels and efficient sono-chemo-photothermal cancer therapy	Theranostics	https://doi.org/10.7150/thno.44879	2020	Yaxin, Hu, Shan, Xue, Ting, Long, Peizhao, Lyu, Xinyu, Zhang, Jingqin, Chen, Siping, Chen, Chengbo, Liu, Xin, Chen	No
In Vivo Real-Time Pharmaceutical Evaluations of Near-Infrared II Fluorescent Nanomedicine Bound Polyethylene Glycol Ligands for Tumor Photothermal Ablation	ACS Nano	https://pubs.acs.org/doi/10.1021/acsnano.0c05885	2020	Shengliang, Li, Haoting, Chen, Haile, Liu, Lu, Liu, Yuan, Yuan, Cong, Mao, Wei, Zhang, Xiaodong, Zhang, Weisheng, Guo, Chun-Sing, Lee, Xing-Jie, Liang	No
Different PEG-PLGA Matrices Influence In Vivo Optical/Photoacoustic Imaging Performance and Biodistribution of NIR-Emitting π-Conjugated Polymer Contrast Agents	Advanced Healthcare Materials	https://doi.org/10.1002/adhm.202001089	2020	Paul Robert, Neumann, Frank, Erdmann, Joost, Holthof, Gabriela, Hädrich, Mark, Green, Jianghong, Rao, Lea Ann, Dailey	No
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	Theranostics	https://doi.org/10.7150/thno.49670	2020	Nicola, Ingram, Laura E., McVeigh, Radwa H., Abou-Saleh, Juliana, Maynard, Sally A., Peyman, James R., McLaughlan, Michael, Fairclough, Gemma, Marston, Elizabeth M. A., Valleley, Jorge L., Jimenez-Macias, Antonia, Charalambous, William, Townley, Malcolm, Haddrick, Antonia, Wierzbicki, Alexander, Wright, Milène, Volpato, Peter B., Simpson, Darren E., Treanor, Neil H., Thomson, Paul M., Loadman, Richard J., Bushby, Benjamin R.G., Johnson, Pamela F., Jones, J. Anthony, Evans, Steven, Freear, Alexander F., Markham, Stephen D., Evans, P. Louise, Coletta	No
Engineering of SPECT/Photoacoustic Imaging/Antioxidative Stress Triple-Function Nanoprobe for Advanced Mesenchymal Stem Cell Therapy of Cerebral Ischemia	ACS Applied Materials & Interfaces	https://pubs.acs.org/doi/10.1021/acsami.0c10500	2020	Minghua, Yao, Xiaojing, Shi, Changjing, Zuo, Ming, Ma, Lu, Zhang, Hongbo, Zhang, Xin, Li, Guo-Yuan, Yang, Yaohui, Tang, Rong, Wu	No
Dual-modal magnetic resonance and photoacoustic tracking and outcome of transplanted tendon stem cells in the rat rotator cuff injury model	Scientific Reports	https://doi.org/10.1038/s41598-020-69214-5	2020	Xueqing, Cheng, Jinshun, Xu, Ziyue, Hu, Jingzhen, Jiang, Zhigang, Wang, Man, Lu	No

Title	Journal	Link	Publication date	References	Top Paper
Platelet membrane-functionalized nanoparticles with improved targeting ability and lower hemorrhagic risk for thrombolysis therapy	Journal of Controlled Release	https://doi.org/10.1016/j.jconrel.2020.08.030	2020	Songli, Wang, Ruifeng, Wang, Nana, Meng, Haiyan, Guo, Sunyi, Wu, Xiaoyi, Wang, Jinyang, Li, Huan, Wang, Kuan, Jiang, Cao, Xie, Yu, Liu, Hao, Wang, Weiyue, Lu	No
Reduction Triggered In Situ Polymerization in Living Mice	Journal of the American Chemical Society	https://doi.org/10.1021/jacs.0c07594	2020	Lina, Cui, Sandro, Vivona, Bryan Ronain, Smith, Sri Rajasekhar, Kothapalli, Jun, Liu, Xiaowei, Ma, Zixin, Chen, Madelynn, Taylor, Paul H., Kierstead, Jean M.J., Fréchet, Sanjiv S., Gambhir, Jianghong, Rao	No
Iron(II) phthalocyanine loaded and as1411 aptamer targeting nanoparticles: A nanocomplex for dual modal imaging and photothermal therapy of breast cancer	International Journal of Nanomedicine	https://doi.org/10.2147/IJN.S254108	2020	Yubei, He, Mengzhu, Wang, Ming, Fu, Xun, Yuan, Yuanli, Luo, Bin, Qiao, Jin, Cao, Zhigang, Wang, Lan, Hao, Gengbiao, Yuan	No
pH-responsive Ag2S nanodots loaded with heat shock protein 70 inhibitor for photoacoustic imaging-guided photothermal cancer therapy	Acta Biomaterialia	https://doi.org/10.1016/j.actbio.2020.08.007	2020	Yaping, Zhong, Yibiao, Zou, Lingyan, Liu, Ruohan, Li, Fengfeng, Xue, Tao, Yi	No
In vivo photoacoustic guidance of stem cell injection and delivery for regenerative spinal cord therapies	Neurophotonics	https://doi.org/10.1117/1.nph.7.3.030501	2020	Kelsey P., Kubelick, Stanislav Y., Emelianov	No
The novel DPP-BDT nanoparticles as efficient photoacoustic imaging and positron emission tomography agents in living mice	International Journal of Nanomedicine	https://doi.org/10.2147/IJN.S238679	2020	Tingting, Li, Xiaoming, Hu, Quli, Fan, Zejing, Chen, Ziliang, Zheng, Ruiping, Zhang	No
Construction of Nucleolin-Targeted Lipid Nanobubbles and Contrast-Enhanced Ultrasound Molecular Imaging in Triple-Negative Breast Cancer	Pharmaceutical Research	https://doi.org/10.1007/s11095-020-02873-1	2020	Kejing, Fang, Luofu, Wang, Haiyun, Huang, Minmin, Lan, Daijia, Shen, Shiwu, Dong, Yanli, Guo	No
Inhibited metastasis and amplified chemotherapeutic effects by epigene-transfection based on a tumor-targeting nanoparticle	International Journal of Nanomedicine	https://doi.org/10.2147/IJN.S247567	2020	Mengzhu, Wang, Zhigang, Wang, Bin, Qiao, Jin, Cao, Luya, Quan, Yuanli, Luo, Hanwen, Qi, Xiaowen, Zhong, Yubei, He, Xianquan, Zhang, Lan, Hao	No
On-demand drug release nanoplatform based on fluorinated aza-BODIPY for imaging-guided chemo-phototherapy	Biomaterials	https://doi.org/10.1016/j.biomaterials.2020.120211	2020	Jiaojiao, Zhang, Han, Huang, Lei, Xue, Liping, Zhong, Wei, Ge, Xuejiao, Song, Yongxiang, Zhao, Wenjun, Wang, Xiaochen, Dong	No
Multimodal theranostics augmented by transmembrane polymer-sealed nano-enzymatic porous MoS2 nanoflowers	International Journal of Pharmaceutics	https://doi.org/10.1016/j.ijpharm.2020.119606	2020	Huiling, Jiang, Yilin, Du, Leilei, Chen, Min, Qian, Yafeng, Yang, Taotao, Huo, Xueying, Yan, Tao, Ye, Bing, Han, Yi, Wang, Rongqin, Huang	No
Magneto-plasmonic nanostars for image-guided and NIR-triggered drug delivery	Scientific Reports	http://dx.doi.org/10.1038/s41598-020-66706-2	2020	Asahi, Tomitaka, Hamed, Arami, Arash, Ahmadivand, Nezih, Pala, Anthony J., McGoron, Yasushi, Takemura, Marcelo, Febo, Madhavan, Nair	No
Targeted nanobubbles carrying indocyanine green for ultrasound, photoacoustic and fluorescence imaging of prostate cancer	International Journal of Nanomedicine	https://doi.org/10.2147/IJN.S243548	2020	Yixuan, Wang, Minmin, Lan, Daijia, Shen, Kejing, Fang, Lianhua, Zhu, Yu, Liu, Lan, Hao, Pan, Li	No

Title	Journal	Link	Publication date	References	Top Paper
Ultrasound monitoring of magnet-guided delivery of mesenchymal stem cells labeled with magnetic lipid–polymer hybrid nanobubbles	Biomaterials Science	http://xlink.rsc.org/?DOI=D0BM00473A	2020	Bo, Zhang, Xinhai, Mo, Fei, Yu, Yuqin, Ma, Fei, Yan	No
Monocyte mimics improve mesenchymal stem cell-derived extracellular vesicle homing in a mouse MI/RI model	Biomaterials	https://doi.org/10.1016/j.biomaterials.2020.120168	2020	Ning, Zhang, Yanan, Song, Zheyong, Huang, Jing, Chen, Haipeng, Tan, Hongbo, Yang, Mengkang, Fan, Qiyu, Li, Qiaozi, Wang, Jinfeng, Gao, Zhiqing, Pang, Juying, Qian, Junbo, Ge	No
Ultrasound Molecular Imaging of Renal Cell Carcinoma: VEGFR targeted therapy monitored with VEGFR1 and FSHR targeted microbubbles	Scientific Reports	https://www.nature.com/articles/s41598-020-64433-2	2020	Alexandre, Ingels, Ingrid, Leguerney, Paul-Henry, Cournède, Jacques, Irani, Sophie, Ferlicot, Catherine, Sébrié, Baya, Benatsou, Laurène, Jourdain, Stephanie, Pitre-Champagnat, Jean-Jacques, Patard, Nathalie, Lassau	No
Ultrasound-Responsive Conversion of Microbubbles to Nanoparticles to Enable Background-Free in Vivo Photoacoustic Imaging	Nano Letters	https://pubs.acs.org/doi/10.1021/acs.nanolett.9b03331	2019	Zhouqi, Meng, Xuanfang, Zhou, Jialin, She, Yaojia, Zhang, Liangzhu, Feng, Zhuang, Liu	No
Indocyanine Green–Coated Gold Nanoclusters for Photoacoustic Imaging and Photothermal Therapy	Advanced Therapeutics	https://onlinelibrary.wiley.com/doi/abs/10.1002/adtp.201900088	2019	Elizabeth, Higbee-Dempsey, Ahmad, Amirshaghaghi, Matthew J., Case, Joann, Miller, Theresa M., Busch, Andrew, Tsourkas	No
Bioinspired lipoproteins-mediated photothermia remodels tumor stroma to improve cancer cell accessibility of second nanoparticles	Nature Communications	http://dx.doi.org/10.1038/s41467-019-11235-4	2019	Tao, Tan, Haiyan, Hu, Hong, Wang, Jie, Li, Zhiwan, Wang, Jing, Wang, Siling, Wang, Zhiwen, Zhang, Yaping, Li	No
Mussel-inspired functionalization of semiconducting polymer nanoparticles for amplified photoacoustic imaging and photothermal therapy	Nanoscale	http://xlink.rsc.org/?DOI=C9NR03490K	2019	Biqing, Bao, Li, Tong, Yu, Xu, Jingjing, Zhang, Xue, Zhai, Peng, Su, Lixing, Weng, Lianhui, Wang	No
Dual-stimuli responsive nanotheranostics for mild hyperthermia enhanced inhibition of Wnt/β-catenin signaling	Biomaterials	https://doi.org/10.1016/j.biomaterials.2019.119709	2020	Tao, Feng, Liang, Zhou, Zhongyuan, Wang, Chunxiao, Li, Yifan, Zhang, Jing, Lin, Desheng, Lu, Peng, Huang	No
Molecular imaging of advanced atherosclerotic plaques with folate receptor-targeted 2D nanoprobes	Nano Research	http://link.springer.com/10.1007/s12274-019-2592-4	2020	Zhide, Guo, Liu, Yang, Mei, Chen, Xuejun, Wen, Huanhuan, Liu, Jingchao, Li, Duo, Xu, Yuanyuan, An, Changrong, Shi, Jindian, Li, Xinhui, Su, Zijing, Li, Ting, Liu, Rongqiang, Zhuang, Nanfeng, Zheng, Haibo, Zhu, Xianzhong, Zhang	No
Photomagnetic Prussian blue nanocubes: Synthesis, characterization, and biomedical applications	Nanomedicine: Nanotechnology, Biology and Medicine	https://doi.org/10.1016/j.nano.2019.102138	2020	Diego S., Dumani, Jason R., Cook, Kelsey P., Kubelick, Jeffrey J., Luci, Stanislav Y., Emelianov	No
Biodegradable Bi 2 O 2 Se Quantum Dots for Photoacoustic Imaging-Guided Cancer Photothermal Therapy	Small	https://onlinelibrary.wiley.com/doi/abs/10.1002/smll.201905208	2020	Hanhan, Xie, Mingqiang, Liu, Baihao, You, Guanghong, Luo, Yue, Chen, Bilu, Liu, Zhenyou, Jiang, Paul K., Chu, Jundong, Shao, Xue-Feng, Yu	No
Bimetallic nanodots for tri-modal CT/MRI/PA imaging and hypoxia-resistant thermoradiotherapy in the NIR-II biological windows	Biomaterials	https://doi.org/10.1016/j.biomaterials.2019.119656	2020	Meng, Lyu, Daoming, Zhu, Yanhong, Duo, Yang, Li, Hong, Quan	No

Title	Journal	Link	Publication date	References	Top Paper
Biodegradable CoS2 nanoclusters for photothermal-enhanced chemodynamic therapy	Applied Materials Today	https://doi.org/10.1016/j.apmt.2019.100464	2020	Xianwen, Wang, Xiaoyan, Zhong, Zhengbao, Zha, Gang, He, Zhaohua, Miao, Huali, Lei, Qunyi, Luo, Rui, Zhang, Zhuang, Liu, Liang, Cheng	No
NIR/ROS-Responsive Black Phosphorus QD Vesicles as Immunoadjuvant Carrier for Specific Cancer Photodynamic Immunotherapy	Advanced Functional Materials	https://onlinelibrary.wiley.com/doi/abs/10.1002/adfm.201905758	2020	Zhi, Li, Yuehua, Hu, Qinrui, Fu, Yang, Liu, Jie, Wang, Jibin, Song, Huanghao, Yang	No
GSH-Depleted PtCu 3 Nanocages for Chemodynamic- Enhanced Sonodynamic Cancer Therapy	Advanced Functional Materials	https://onlinelibrary.wiley.com/doi/abs/10.1002/adfm.201907954	2020	Xiaoyan, Zhong, Xianwen, Wang, Liang, Cheng, Yong'an, Tang, Guiting, Zhan, Fei, Gong, Rui, Zhang, Jun, Hu, Zhuang, Liu, Xiangliang, Yang	No
Effects of Freezing on Mesenchymal Stem Cells Labeled with Gold Nanoparticles	Tissue Engineering Part C: Methods	https://www.liebertpub.com/doi/10.1089/ten.tec.2019.0198	2020	Makenna K., Laffey, Kelsey P., Kubelick, Eleanor M., Donnelly, Stanislav Y., Emelianov	No
Platelet-Mimicking Biotaxis Targeting Vasculature-Disrupted Tumors for Cascade Amplification of Hypoxia-Sensitive Therapy	ACS Nano	https://pubs.acs.org/doi/10.1021/acsnano.9b07330	2019	Mingkang, Zhang, Jing-Jie, Ye, Yu, Xia, Zi-Yang, Wang, Chu-Xin, Li, Xiao-Shuang, Wang, Wuyang, Yu, Wen, Song, Jun, Feng, Xian-Zheng, Zhang	No
Scalable dextran-polypyrrole nano-assemblies with photothermal/photoacoustic dual capabilities and enhanced biocompatibility	Carbohydrate Polymers	https://doi.org/10.1016/j.bbamem.2019.183135	2020	Wanqiu, Huang, Tao, Leng, Miaomiao, Gao, Qiangqiang, Hu, Lingshan, Liu, Hongjing, Dou	No
Near-Infrared Light-Responsive Nitric Oxide Delivery Platform for Enhanced Radioimmunotherapy	Nano-Micro Letters	https://doi.org/10.1007/s40820-020-00431-3	2020	Xuanfang, Zhou, Zhouqi, Meng, Jialin, She, Yaojia, Zhang, Xuan, Yi, Hailin, Zhou, Jing, Zhong, Ziliang, Dong, Xiao, Han, Muchao, Chen, Qin, Fan, Kai, Yang, Chao, Wang	No
Pickering Bubbles as Dual-Modality Ultrasound and Photoacoustic Contrast Agents	ACS Applied Materials & Interfaces	https://pubs.acs.org/doi/10.1021/acsami.0c02091	2020	Al, de Leon, Peiran, Wei, Filip, Bordera, Dana, Wegierak, Madelyn, McMillen, David, Yan, Christina, Hemmingsen, Michael C., Kolios, Emily B., Pentzer, Agata A., Exner	No
Magnetic targeted near-infrared II PA/MR imaging guided photothermal therapy to trigger cancer immunotherapy	Theranostics	http://www.thno.org/v10p4997.htm	2020	Qinrui, Fu, Zhi, Li, Jiamin, Ye, Zhong, Li, Fengfu, Fu, Syue-Liang, Lin, Cheng Allen, Chang, Huanghao, Yang, Jibin, Song	No
Light-activated gold nanorod vesicles with NIR-II fluorescence and photoacoustic imaging performances for cancer theranostics	Theranostics	http://www.thno.org/v10p4809.htm	2020	Xiaoguang, Ge, Qinrui, Fu, Lichao, Su, Zhi, Li, Wenmin, Zhang, Tao, Chen, Huanghao, Yang, Jibin, Song	No
Biodegradable rare earth fluorochloride nanocrystals for phototheranostics	RSC Advances	http://xlink.rsc.org/?DOI=D0RA00760A	2020	Xinyu, Zhao, Qi, Yu, Jun, Yuan, Nitish V., Thakor, Mei Chee, Tan	No