

Stanford



Hamed Arami

Postdoctoral Research Fellow, Radiology

Bio

HONORS AND AWARDS

- Marie-Curie Minded Fellowship, Marie Skłodowska-Curie (MSC) COFUND Action Funded by European Union's Horizon 2020 (2018)
- World Molecular Imaging Congress (WMIC) Travel Award, Magnetic Insight Inc. (2017)
- Distinguished Young Scholar Award, University of Washington (2016)
- Materials Research Society (MRS) Graduate Students Award, Materials Research Society (MRS) (2016)
- NIH T32 Postdoctoral Fellowship, Stanford Cancer Imaging Training (SCIT), Stanford University (2016)
- Super-resolution Fluorescent Microscopy Workshop scholarship, University of Washington (2015)
- Graduate School Conference Travel Award, University of Washington (2014)
- Advanced Future Faculty workshop & Materials Genome Initiative travel award, Northeastern University, National Science Foundation (NSF) (2013)

PROFESSIONAL EDUCATION

- Master of Science, Sharif University of Technology (2007)
- Bachelor of Science, Sharif University of Technology (2004)
- Doctor of Philosophy, University of Washington (2015)

STANFORD ADVISORS

- Sanjiv Gambhir, Postdoctoral Faculty Sponsor
- Sanjiv Gambhir, Postdoctoral Research Mentor

LINKS

- "Google Scholar": <https://scholar.google.com/citations?user=6--oHdkAAAAJ&hl=en>

Publications

PUBLICATIONS

- **Nanomedicine for Spontaneous Brain Tumors: A Companion Clinical Trial** *ACS NANO*
Arami, H., Patel, C. B., Madsen, S. J., Dickinson, P. J., Davis, R. M., Zeng, Y., Sturges, B. K., Woolard, K. D., Habte, F. G., Akin, D., Sinclair, R., Gambhir, S. S.
2019; 13 (3): 2858–69
- **DNA-templated strontium-doped calcium phosphate nanoparticles for gene delivery in bone cells** *ACS Biomaterials Science and Engineering*
Khalifehzadeh, R., Arami, H.
2019
- **Dynamic magnetic characterization and magnetic particle imaging enhancement of magnetic-gold core-shell nanoparticles** *NANOSCALE*

- Tomitaka, A., Ota, S., Nishimoto, K., Arami, H., Takemura, Y., Nair, M.
2019; 11 (13): 6489-6496
- **Hybrid magneto-plasmonic liposomes for multimodal image-guided and brain-targeted HIV treatment** *NANOSCALE*
Tomitaka, A., Arami, H., Huang, Z., Raymond, A., Rodriguez, E., Cai, Y., Febo, M., Takemura, Y., Nair, M.
2018; 10: 184-194
 - **Cell penetrating peptides in preclinical and clinical cancer diagnosis and therapy.** *Oncotarget*
Tripathi, P. P., Arami, H., Banga, I., Gupta, J., Gandhi, S.
2018; 9 (98): 37252-67
 - **An intravascular magnetic wire for the high-throughput retrieval of circulating tumour cells in vivo.** *Nature biomedical engineering*
Vermesh, O., Aalipour, A., Ge, T. J., Saenz, Y., Guo, Y., Alam, I. S., Park, S., Adelson, C. N., Mitsutake, Y., Vilches-Moure, J., Godoy, E., Bachmann, M., Ooi, et al
2018; 2: 696-705
 - **Tumor Treating Fields Increases Membrane Permeability in Glioblastoma Cells** *Cell Death Discovery*
(equal contribution) Chang, E., (equal contribution) Patel, C. B., Pohling, C., Young, C., Song, J., Flores, T., Zeng, Y., Joubert, L. M., Arami, H., Natarajan, A., Sinclair, R., Gambhir, S. S.
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 - **Image-Guided Therapy** *ADVANCES IN PERSONALIZED NANOTHERAPEUTICS*
Tomitaka, A., Arami, H., Takemura, Y., Nair, M.
2017: 41-55
 - **Development of magneto-plasmonic nanoparticles for multimodal image-guided therapy to the brain** *NANOSCALE*
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2017; 9 (2): 764-773
 - **Tomographic magnetic particle imaging of cancer targeted nanoparticles** *NANOSCALE*
Arami, H., Teeman, E., Troksa, A., Bradshaw, H., Saatchi, K., Tomitaka, A., Gambhir, S. S., Häfeli, U. O., Liggitt, D., Krishnan, K. M.
2017; 9: 18723-18730
 - **Surface-enhanced Raman Spectroscopy (SERS) For Intraoperative Brain Tumor Imaging And Photothermal Therapy** *NEURO-ONCOLOGY*
Arami, H., Chang, E., Patel, C. B., Madsen, S. J., Davis, R. M., Sinclair, R., Gambhir, S. S.
2017; 19: vi159
 - **Detection of Cancer-Specific Proteases Using Magnetic Relaxation of Peptide-Conjugated Nanoparticles in Biological Environment** *NANO LETTERS*
Gandhi, S., Arami, H., Krishnan, K. M.
2016; 16 (6): 3668-3674
 - **Ferromagnetic FePt/Au Core/Shell Nanoparticles Prepared Via Solvothermal Annealing** *IEEE MAGNETICS LETTERS*
Poudyal, N., Gandha, K., Liu, J., Arami, H., Liu, J.
2016
 - **Low drive field amplitude for improved image resolution in magnetic particle imaging** *Medical Physics*
Croft, L., Goodwill, P., Konkle, J., Arami, H., Price, D., Li, A., Saritas, E., Conolly, S.
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 - **Magnetic Particle Imaging (MPI) Tracers for In Vivo Applications**
Arami, H.
2016
 - **In vivo multimodal magnetic particle imaging (MPI) with tailored magneto/optical contrast agents** *BIOMATERIALS*
Arami, H., Khandhar, A. P., Tomitaka, A., Yu, E., Goodwill, P. W., Conolly, S. M., Krishnan, K. M.
2015; 52: 251-261
 - **Magnetic Particle Imaging With Tailored Iron Oxide Nanoparticle Tracers** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
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- **Tuning Surface Coatings of Optimized Magnetite Nanoparticle Tracers for In Vivo Magnetic Particle Imaging** *IEEE TRANSACTIONS ON MAGNETICS*
Khandhar, A. P., Ferguson, R. M., Arami, H., Kemp, S. J., Krishnan, K. M.
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 - **Synthesis of phase-pure and monodisperse iron oxide nanoparticles by thermal decomposition** *NANOSCALE*
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2015; 7 (25): 11142-11154
 - **Quantitative “Hot-Spot” Imaging of Transplanted Stem Cells Using Superparamagnetic Tracers and Magnetic Particle Imaging** *TOMOGRAPHY*
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 - **Ex Situ and In Situ (S)TEM of Iron Oxide Nanoparticles Synthesized by Decomposition of an Organometallic Precursor** *MICROSCOPY AND MICROANALYSIS*
Hufschmid, R., Arami, H., Krishnan, K., Browning, N.
2015 ; 21 (S3): 965-966
 - **In vivo delivery, pharmacokinetics, biodistribution and toxicity of iron oxide nanoparticles** *Chemical Society Reviews*
Arami, H., Khandhar, A., Liggitt, D., Krishnan, K.
2015 ; 44: 8576-8607
 - **Lactoferrin conjugated iron oxide nanoparticles for targeting brain glioma cells in magnetic particle imaging** *NANOSCALE*
Tomitaka, A., Arami, H., Gandhi, S., Krishnan, K. M.
2015; 7 (40): 16890-16898
 - **Room-temperature detection of a single 19 nm super-paramagnetic nanoparticle with an imaging magnetometer** *APPLIED PHYSICS LETTERS*
Gould, M., Barbour, R. J., Thomas, N., Arami, H., Krishnan, K. M., Fu, K. C.
2014; 105 (7)
 - **Self-consistent magnetic properties of magnetite tracers optimized for magnetic particle imaging measured by ac susceptometry, magnetorelaxometry and magnetic particle spectroscopy** *JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS*
Ludwig, F., Remmer, H., Kuhlmann, C., Wawrzik, T., Arami, H., Ferguson, R. M., Krishnan, K. M.
2014; 360: 169-173
 - **Intracellular performance of tailored nanoparticle tracers in magnetic particle imaging** *JOURNAL OF APPLIED PHYSICS*
Arami, H., Krishnan, K. M.
2014; 115 (17)
 - **Tailoring the magnetic and pharmacokinetic properties of iron oxide magnetic particle imaging tracers** *BIOMEDICAL ENGINEERING-BIOMEDIZINISCHE TECHNIK*
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 - **Size-dependent ferrohydrodynamic relaxometry of magnetic particle imaging tracers in different environments** *MEDICAL PHYSICS*
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2013; 40 (7)
 - **Highly Stable Amine Functionalized Iron Oxide Nanoparticles Designed for Magnetic Particle Imaging (MPI)** *IEEE TRANSACTIONS ON MAGNETICS*
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 - **Targeted Cell Uptake of a Noninternalizing Antibody Through Conjugation to Iron Oxide Nanoparticles in Primary Central Nervous System Lymphoma** *WORLD NEUROSURGERY*
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- **ASSESSING THE LIMITS OF MPI TRACER PERFORMANCE** *International Workshop on Magnetic Particle Imaging (IWMPI)*
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- **ROLE OF BIOFUNCTIONALIZATION AND TRACER CROSS-LINKING IN MAGNETIC PARTICLE SPECTROMETRY** *International Workshop on Magnetic Particle Imaging (IWMPI)*
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- **Physical and biological optimization of core-shell nanoparticle tracers for in vivo MPI** *International Workshop on Magnetic Particle Imaging (IWMPI)*
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- **Targeting of Primary Breast Cancers and Metastases in a Transgenic Mouse Model Using Rationally Designed Multifunctional SPIONs** *ACS NANO*
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- **Chitosan-coated iron oxide nanoparticles for molecular imaging and drug delivery** *Advances in Polymer Science*
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2011; 243: 163-184
- **Synthesis and Characterization of Magnetic FePt/Au Core/Shell Nanoparticles** *JOURNAL OF PHYSICAL CHEMISTRY C*
Yano, K., Nandwana, V., Chaubey, G. S., Poudyal, N., Kang, S., Arami, H., Griffis, J., Liu, J. P.
2009; 113 (30): 13088-13091
- **Rapid formation of hydroxyapatite nanostrips via microwave irradiation** *JOURNAL OF ALLOYS AND COMPOUNDS*
Arami, H., Mohajerani, M., Mazloumi, M., Khalifehzadeh, R., Lak, A., Sadrnezhad, S. K.
2009; 469 (1-2): 391-394
- **Self-assembled nanostructured ZnO hollow spheres with UVA luminescence** *ADVANCES IN APPLIED CERAMICS*
Arami, H., Mazloumi, M., Khalifehzadeh, R., Sadrnezhad, S. K.
2009; 108 (2): 73-77
- **Self-assembly of ZnO nanoparticles and subsequent formation of hollow microspheres** *JOURNAL OF ALLOYS AND COMPOUNDS*
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- **Effect of predeformation and heat treatment conditions in the SIMA process on microstructural and mechanical properties of A319 aluminum alloy** *JOURNAL OF ALLOYS AND COMPOUNDS*
Arami, H., Khalifehzadeh, R., Keyvan, H., Khomamizadeh, F.
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2009; 1 (2): 71-76
- **Rapid Formation of Mono-Dispersed Hydroxyapatite Nanorods with Narrow-Size Distribution via Microwave Irradiation** *JOURNAL OF THE AMERICAN CERAMIC SOCIETY*
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2008; 91 (11): 3580-3584
- **Surfactant free hydrothermal formation of Pb3O4 nanorods** *JOURNAL OF ALLOYS AND COMPOUNDS*
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- **Mechanical induced reaction in Al-CuO system for in-situ fabrication of Al based nanocomposites** *JOURNAL OF ALLOYS AND COMPOUNDS*
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- **Self-Assembly of Dandelion-Like Hydroxyapatite Nanostructures Via Hydrothermal Method** *JOURNAL OF THE AMERICAN CERAMIC SOCIETY*
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- **Bundles of self-assembled boehmite nanostrips from a surfactant free hydrothermal route** *JOURNAL OF ALLOYS AND COMPOUNDS*
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- **Microporosity control and thermal-fatigue resistance of A319 aluminum foundry alloy** *MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING*
Arami, H., Khalifetizadeh, R., Akbari, M., Khomamizadeh, F.
2008; 472 (1-2): 107-114
- **Self-assembled dahlia-like cadmium hydrogen phosphate hydrate nanostructures as templates for cadmium hydroxyapatite hexagonal prisms** *JOURNAL OF CRYSTAL GROWTH*
Arami, H., Mazloumi, M., Khalifehzadeh, R., Lak, A., Sadrnezhad, S. K.
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- **Interfacial energy determination of nano-scale precipitates by CALPHAD description of Gibbs-Thomson effect** *JOURNAL OF MATERIALS SCIENCE*
Shahandeh, S., Arami, H., Sadrnezhad, S. K.
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- **Electron beam-induced "nanocalcination" of boehmite nanostrips to mesoporous alpha-alumina phase** *JOURNAL OF THE AMERICAN CERAMIC SOCIETY*
Arami, H., Mazloumi, M., Khalifehzadeh, R., Khatiboleslam, S., Sadrnezhadw, S. K.
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- **Sonochemical preparation of TiO₂ nanoparticles** *MATERIALS LETTERS*
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- **Reactive milling synthesis of nanocrystalline Al-Cu/Al₂O₃ nanocomposite** *MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING*
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- **Studies on synthesis of alumina nanopowder from synthetic Bayer liquor** *MATERIALS RESEARCH BULLETIN*
Mazloumi, M., Arami, H., Khalifehzadeh, R., Sadrnezhad, S. K.
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- **Alumina nanopowder production from synthetic Bayer liquor** *JOURNAL OF THE AMERICAN CERAMIC SOCIETY*
Mazloumi, M., Khalifehzadeh, R., Sadrnezhad, S. K., Arami, H.
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- **Flower-like bundles of ZnO nanosheets as an intermediate between hollow nanosphere and nanoparticles** *MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING*
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