

Zygmunt Gryczynski, PhD
Graduate School of Biomedical Sciences
Microbiology, Immunology & Genetics
Email: Zygmunt.Gryczynski@unthsc.edu

Area of Expertise

Dr. Gryczynski's areas of research include fluorescence spectroscopy, time-resolved fluorescence, fluorescence imaging, protein-protein interactions, and thermodynamics of protein-ligand interaction. His interests are focused on applications of plasmonics and nanoplasmonics to study protein binding and protein conformational changes.

Qualifications

PhD in Spectroscopy, University of Gdansk
MS in Physics, University of Gdansk

Recent Publications

Non-fluorescent filters for fluorescence detection with in-line geometry

Kimball, J., Chavez, J., Ceresa, L., Shah, S., Gryczynski, I. & Gryczynski, Z., 16 May 2019, In : Methods and Applications in Fluorescence. 7, 3, 037001.

Plasmonically-powered hot carrier induced modulation of light emission in a two-dimensional GaAs semiconductor quantum well

Ashalley, E., Gryczynski, Z., Wang, Z., Salamo, G. & Neogi, A., 7 Mar 2019, In : Nanoscale. 11, 9, p. 3827-3836 10 p.

Identification of Binding Sites for Efflux Pump Inhibitors of the AcrAB-ToIC Component AcrA

Darzynkiewicz, Z. M., Green, A. T., Abdali, N., Hazel, A., Fulton, R. L., Kimball, J., Gryczynski, Z., Gumbart, J. C., Parks, J. M., Smith, J. C. & Zgurskaya, H. I., 19 Feb 2019, In : Biophysical Journal. 116, 4, p. 648-658 11 p.

Enhanced DNA detection using a multiple pulse pumping scheme with time-gating (MPPTG)

Kimball, J. D., Maliwal, B., Raut, S. L., Doan, H., Nurekeyev, Z., Gryczynski, I. & Gryczynski, Z., 21 Jun 2018, In : Analyst. 143, 12, p. 2819-2827 9 p.

Surface plasmon-assisted microscope

Borejdo, J., Gryczynski, Z., Fudala, R., Joshi, C. R., Borgmann, K., Ghorpade, A. & Gryczynski, I., 1 Jun 2018, In : Journal of Biomedical Optics. 23, 6, 060502.

Differences in the spatial distribution of actin in the left and right ventricles of functioning rabbit hearts

Nagwekar, J., Duggal, D., Rich, R., Fudala, R., Gryczynski, I., Raut, S. L., Gryczynski, Z. & Borejdo, J., 1 Mar 2018, In : Medical Photonics. 27, p. 1-8 8 p.

Imaging viscosity of intragranular mucin matrix in cystic fibrosis cells

Requena, S., Ponomarchuk, O., Castillo, M., Rebik, J., Brochiero, E., Borejdo, J., Gryczynski, I., Dzyuba, S. V., Gryczynski, Z., Grygorczyk, R. & Fudala, R., 1 Dec 2017, In : Scientific Reports. 7, 1, 16761.

No difference in myosin kinetics and spatial distribution of the lever arm in the left and right ventricles of human hearts

Duggal, D., Requena, S., Nagwekar, J., Raut, S. L., Rich, R., Das, H., Patel, V., Gryczynski, I., Fudala, R., Gryczynski, Z., Blair, C., Campbell, K. S. & Borejdo, J., 13 Oct 2017, In : Frontiers in Physiology. 8, OCT, 732.

Fluorescence properties of doxorubicin in PBS buffer and PVA films

Shah, S., Chandra, A., Kaur, A., Sabnis, N., Lacko, A. G., Gryczynski, Z., Fudala, R. & Gryczynski, I., 1 May 2017, In : Journal of Photochemistry and Photobiology B: Biology. 170, p. 65-69 5 p.

Intrinsic Fluorescence of Triazine Dendrimers Provides a New Approach to Study Dendrimer Structure and Conformational Dynamics

Raut, S. L., Enciso, A. E., Pavan, G. M., Lee, C., Yepremyan, A., Tomalia, D. A., Simanek, E. E. & Gryczynski, Z., 30 Mar 2017, In : Journal of Physical Chemistry C. 121, 12, p. 6946-6954 9 p.

Sponsored Projects

Engineering Resonance Energy Transfer for Advanced Immunoassays

Gryczynski, I., Gryczynski, Z. & Fudala, R.
National Science Foundation
1/06/13 → 31/05/16

Material Transfer and Sponsored Research with Revalesio Corporation

Gryczynski, Z. & Gryczynski, I.
Revalesio Corporation
30/08/13 → 30/08/14

Molecular Beacon-Based Nanoparticles for TNBC Imaging and Targeted Therapy

Vishwanatha, J. & Gryczynski, Z.
Intramural Research(UNTHSC)
1/04/14 → 31/08/15

Molecular Beacon-Based Nanoparticles for TNBC Imaging and Targeted Therapy

Vishwanatha, J., Gryczynski, Z. & Ranjan, A.
NCI: National Cancer Institute
19/02/15 → 31/01/17

Nanophotonic Approach to Imaging Exocytosis

Gryczynski, Z., Borejdo, J. & Gryczynski, I.
NCI: National Cancer Institute
1/03/10 → 29/02/12

Non-invasive Fluorescence Polarization Based Detection of Melanoma

Gryczynski, Z.
Sigma Xi
1/01/15 → 31/01/16

Novel Fluorophores for Molecular and Cellular Imaging

Gryczynski, Z., Borejdo, J. & Gryczynski, I.
NIBIB: Nat Inst of Biomedical Imaging
1/04/11 → 31/01/15

Novel Organic Fluorophores for Biomedical Applications (For: Rahul Chib)

Gryczynski, Z.
Intramural Research(UNTHSC)
1/01/15 → 31/08/16

UNTHSC Support for Lockheed Martin in the Area of Eye Safety Pertaining to Optical Radiation

Clark, A., Gryczynski, Z. & Gryczynski, I.
Lockheed Martin Missiles & Fire Control
1/10/11 → 1/10/12