

## Publications:

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| <a href="#"><u>Development and calibration of an automated Mueller matrix polarization imaging system</u></a>  | 2002 |
| JS Baba, JR Chung, AH DeLaughter, BD Cameron, GL Cote<br>Journal of Biomedical Optics 7 (3), 341-349   |      |
| <a href="#"><u>In vivo application of a minimally invasive oximetry based perfusion sensor</u></a>   | 2002 |
| MN Ericson, BL Ibey, GL Cote, JS Baba, JB Dixon, MS Hileman, CL Britton, MA ...<br>Engineering in Medicine and Biology, 2002. 24th Annual Conference and the ...                   |      |
| <a href="#"><u>Effect of temperature, pH, and corneal birefringence on polarimetric glucose monitoring in the eye</u></a>  | 2002 |
| JS Baba, BD Cameron, S Theru, GL Cote<br>Journal of biomedical optics 7 (3), 321-328   |      |
| <a href="#"><u>Measurement of the glucose transport time delay between the blood and aqueous humor of the eye for the eventual development of a noninvasive glucose sensor</u></a> | 2001 |
| BD Cameron, JS Baba, GL Coté<br>Diabetes technology & therapeutics 3 (2), 201-207  |      |
| <a href="#"><u>Pseudodielectric functions of uniaxial materials in certain symmetry directions</u></a>   | 2006 |
| GE Jellison Jr, JS Baba<br>JOSA A 23 (2), 468-475  |      |
| <a href="#"><u>Implantable sensor for blood flow monitoring after transplant surgery</u></a>   | 2004 |
| MN Ericson, MA Wilson, GL Coté, JS Baba, W Xu, M Bobrek, CL Britton, MS ...<br>Minimally Invasive Therapy & Allied Technologies 13 (2), 87-94                                      |      |
| <a href="#"><u>Quantitative high-resolution microradiographic imaging of amyloid deposits in a novel murine model of AA amyloidosis</u></a>  | 2005 |
| JS Wall, SJ Kennel, MJ Paulus, S Gleason, J Gregor, J Baba, M Schell, T ...<br>Amyloid 12 (3), 149-156   |      |
| <a href="#"><u>Development of an implantable oximetry-based organ perfusion sensor</u></a>   | 2004 |
| MN Ericson, MA Wilson, GL Cote, CL Britton, W Xu, JS Baba, M Bobrek, MS ...<br>Engineering in Medicine and Biology Society, 2004. IEMBS'04. 26th Annual ...                        |      |
| <a href="#"><u>Optical polarimetry applied to the development of a noninvasive in-vivo glucose monitor</u></a>   | 2000 |
| BD Cameron, JS Baba, GL Cote<br>BiOS 2000 The International Symposium on Biomedical Optics, 66-77  |      |
| <a href="#"><u>Real-time, high-accuracy 3D tracking of small animals for motion-corrected SPECT imaging</u></a>  | 2004 |
| SS Gleason, JS Goddard, MJ Paulus, JS Baba, S Majewski, M Smith, T Tran, A ...<br>Nuclear Science Symposium Conference Record, 2004 IEEE 5, 3338-3342                              |      |

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| <a href="#"><u>Awake animal SPECT: Overview and initial results</u></a>  | 2008 |
| AG Weisenberger, B Kross, S Majewski, J McKisson, V Popov, J Proffitt, A ...<br>Nuclear Science Symposium Conference Record, 2008. NSS'08. IEEE, 5588-5591 |      |
| <a href="#"><u>Instrumentation development of a SPECT-CT system to image awake mice</u></a>  | 2006 |
| AG Weisenberger, B Kross, S Majewski, V Popov, MF Smith, VH Tran, B Welch, J ...<br>Nuclear Science Symposium Conference Record, 2006. IEEE 5, 3000-3003   |      |
| <a href="#"><u>Method and apparatus for non-invasive glucose sensing through the eye</u></a>   | 2005 |
| GL Coté, JS Baba<br>US Patent 6,885,882  |      |
| <a href="#"><u>Dual-detector polarimetry for compensation of motion artifact in a glucose sensing system</u></a>   | 2002 |
| JS Baba, GL Cote<br>International Symposium on Biomedical Optics, 76-80  |      |
| <a href="#"><u>Wavelength, temperature, and voltage dependent calibration of a nematic liquid crystal multispectral polarization generating device</u></a> | 2007 |
| JS Baba, PR Boudreaux<br>Applied optics 46 (22), 5539-5544   |      |
| <a href="#"><u>Mueller matrix imaging for cancer detection</u></a>   | 2003 |
| AM Baldwin, JR Chung, JS Baba, CH Spiegelman, MS Amoss, GL Cote<br>Engineering in Medicine and Biology Society, 2003. Proceedings of the 25th ...          |      |
| <a href="#"><u>Investigation of pH and temperature on optical rotatory dispersion for non-invasive glucose monitoring</u></a>                              | 2001 |
| JS Baba, A Meledeo, BD Cameron, GL Cote<br>Proc. SPIE 4263, 25-33  |      |
| <a href="#"><u>The use of polarized light for biomedical applications</u></a>  | 2003 |
| JS Baba<br>Texas A&M University  |      |
| <a href="#"><u>Laser polarization noise elimination in sensitive polarimetric systems</u></a>  | 2002 |
| JS Baba, JR Chung, GL Cote<br>Optical Engineering 41 (5), 938-942  |      |
| <a href="#"><u>Real-time awake animal motion tracking system for SPECT imaging</u></a>   | 2008 |
| JS Goddard, JS Baba, SJ Lee, AG Weisenberger, A Stolin, J McKisson, MF Smith<br>Nuclear Science Symposium Conference Record, 2008. NSS'08. IEEE, 4707-4710 |      |
| <a href="#"><u>Development and use of a novel automated Mueller matrix polarization imaging system for In-vivo imaging of lesions</u></a>                  | 2002 |
| JR Chung, JS Baba, AH DeLaughter, GL Cote<br>International Symposium on Biomedical Optics, 111-117   |      |

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| <a href="#"><u>Development and calibration of an automated Mueller matrix polarization system for skin lesion differentiation</u></a>                       | 2001 |
| AR Hill, BD Cameron, JR Chung, JS Baba, GL Cote<br>BiOS 2001 The International Symposium on Biomedical Optics, 449-454                                      |      |
| <a href="#"><u>Optimizing source detector separation for an implantable perfusion and oxygenation sensor</u></a>  | 2011 |
| TJ Akl, TJ King, R Long, JS Baba, MJ McShane, MN Ericson, MA Wilson, GL Cote<br>SPIE BiOS, 790605-790605-5  |      |
| <a href="#"><u>Intrinsic feature pose measurement for awake animal SPECT imaging</u></a>  | 2009 |
| JS Goddard, JS Baba, SJ Lee, AG Weisenberger, A Stolin, J McKisson, MF Smith<br>Nuclear Science Symposium Conference Record (NSS/MIC), 2009 IEEE, 2557-2560 |      |
| <a href="#"><u>Application of simulated annealing for simultaneous retrieval of particle size distribution and refractive index</u></a>                     | 2009 |
| L Ma, L Kranendonk, W Cai, Y Zhao, J Baba<br>Journal of Aerosol Science 40 (7), 588-596   |      |
| <a href="#"><u>Method and apparatus for orthopedic implant assessment</u></a>   | 2005 |
| MN Ericson, CL Britton, JS Baba, RJ Warmack<br>US Patent App. 11/259,815  |      |
| <a href="#"><u>An investigation of Rabbit corneal birefringence for the purpose of improving noninvasive polarimetric in-vivo glucose detection</u></a>     | 2002 |
| JS Baba, GL Cote, S Theru<br>Engineering in Medicine and Biology, 2002. 24th Annual Conference and the ...  |      |
| <a href="#"><u>Effect of geometric and motion tracking error for awake small animal SPECT</u></a>   | 2009 |
| SJ Lee, JS Baba, JS Goddard, A Stolin, J McKisson, AG Weisenberger, MF Smith<br>Nuclear Science Symposium Conference Record (NSS/MIC), 2009 IEEE, 3415-3419 |      |
| <a href="#"><u>SYSTEM AND METHOD FOR TRACKING MOTION FOR GENERATING MOTION CORRECTED TOMOGRAPHIC IMAGES</u></a>   | 2008 |
| JS Goddard, JS Baba<br>US Patent App. 12/117,213  |      |
| <a href="#"><u>Image Reconstruction for Awake Animal SPECT Imaging</u></a>  | 2008 |
| AV Stolin, J McKisson, AG Weisenberger, JS Baba, JM Goddard, SJ Lee, MF Smith<br>Conference Record, IEEE  |      |
| <a href="#"><u>Improved pose measurement and tracking system for motion correction of awake, unrestrained small animal SPECT imaging</u></a>                | 2007 |
| JS Goddard, JS Baba, AG Weisenberger, MF Smith<br>Nuclear Science Symposium Conference Record, 2007. NSS'07. IEEE 4, 2937-2940                              |      |
| <a href="#"><u>Geometry calibration of a dual headed SPECT system, with rocking motion correction, for small animal imaging</u></a>                         | 2005 |

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[Application of polarization for optical motion-registered SPECT functional imaging of tumors in mice](#)

JS Baba, SS Gleason, JS Goddard, MJ Paulus  
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[Dual low profile detector heads for a restraint free small animal SPECT imaging system](#)

AG Weisenberger, JS Baba, B Kross, SS Gleason, J Goddard, S Majewski, SR ...  
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[Interpretation of Mueller matrix images based on polar decomposition and statistical discriminators to distinguish skin cancer](#)

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[Analysis of Mueller matrix images by polar decomposition](#)

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[A custom electronics platform for implantable perfusion sensor development](#)

MN Ericson, SS Frank, CL Britton, JS Baba, SJ Lee, TE McKnight, M Bobrek, E ...  
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[Tree image growth analysis using instantaneous phase modulation](#)

J Ramachandran, MS Pattichis, LA Scuderi, JS Baba  
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[Improvements in intrinsic feature pose measurement for awake animal imaging](#)

JS Goddard, JS Baba, SJ Lee, AG Weisenberger, A Stolin, J McKisson, MF Smith  
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[Development of a multispectral tissue characterization system for optimization of an implantable perfusion status monitor for transplanted liver](#)

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[Extension of the Inverse Adding-Doubling Method to the Measurement of Wavelength-Dependent Absorption and Scattering Coefficients of Biological Samples](#)

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[Modeling the rabbit's eye with the Mueller matrix for birefringent properties](#)

JS Baba, CT Cooper, GL Cote  
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| <a href="#"><u>Molecular Imaging of Conscious, Unrestrained Mice with AwakeSPECT</u></a>   | 2013 |
| JS Baba, CJ Endres, CA Foss, S Nimmagadda, H Jung, JS Goddard, S Lee, J ...<br>Journal of Nuclear Medicine 54 (6), 969-976                                     |      |
| <a href="#"><u>INTRINSIC FEATURE-BASED POSE MEASUREMENT FOR IMAGING MOTION COMPENSATION</u></a>  | 2012 |
| JS Baba, JS Goddard Jr<br>US Patent 20,120,293,667   |      |
| <a href="#"><u>Generalized dynamic PET inter-frame and intra-frame motion correction-Phantom and human validation studies</u></a>                              | 2012 |
| H Mohy-ud-Din, NA Karakatsanis, JS Goddard, J Baba, W Wills, AK Tahari, DF ...<br>Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC), 2012 ... |      |
| <a href="#"><u>Investigation of Cadmium Zinc Telluride based system as a room temperature planar imager for plant functional imaging</u></a>                   | 2012 |
| JS Baba, BA Bale, LF Scheel, SM Davern, TE McKnight, L Fabris<br>Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC), 2012 ...                  |      |
| <a href="#"><u>Full-field imaging-based instantaneous hyperspectral absolute refractive index measurement</u></a>  | 2012 |
| JS Baba, PR Boudreaux<br>Optics Letters 37 (9), 1520-1522  |      |
| <a href="#"><u>Development of radionuclide based instrumentation for the quantitative study of plant physiology</u></a>  | 2011 |
| JS Baba, BA Bale, MS Allegood<br>Future of Instrumentation International Workshop (FIIW), 2011, 133-136  |      |
| <a href="#"><u>Dual-headed SPECT for awake animal brain imaging</u></a>  | 2011 |
| S Lee, B Kross, AG Weisenberger, J McKisson, JS Goddard, JS Baba, MF Smith<br>Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC), 2011 ...     |      |
| <a href="#"><u>OP17. 05: Fetal lung response after complete and partial tracheal occlusion using a prototype engineered "smart" balloon in sheep model</u></a> | 2011 |
| R Ruano, DA Lazar, O Olutoye, T Mcknight, D Vilnave, MN Ericson, JS Baba, A ...<br>Ultrasound in Obstetrics & Gynecology 38 (S1), 105-106                      |      |
| <a href="#"><u>Investigation of source-detector separation optimization for an implantable perfusion and oxygenation sensor for liver blood vessels</u></a>    | 2011 |
| JS Baba, TJ Akl, GL Coté, MA Wilson, MN Ericson<br>Proceedings of SPIE 7890, 78900A  |      |
| <a href="#"><u>Determining biological tissue optical properties via integrating sphere spatial measurements</u></a>  | 2011 |
| JS Baba, BS Letzen<br>US Patent 7,869,049  |      |

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| <a href="#"><u>REMOTE ACTUATED VALVE IMPLANT</u></a>   | 2010 |
| TE MCKNIGHT, A JOHNSON, KJ MOISE Jr, MN ERICSON, JS BABA, JB WILGEN, B EVANS<br>WO Patent 2,010,111,225  |      |
| <a href="#"><u>REMOTE ACTUATED VALVE IMPLANT</u></a>   | 2010 |
| TE McKnight, A Johnson, KJ Moise, MN Ericson, JS Baba, JB Wilgen, III Boyd ...<br>US Patent App. 12/729,671  |      |
| <a href="#"><u>Remote actuated valve implant</u></a>   | 2010 |
| TE Mcknight, A Johnson, KJ Moise Jr, MN Ericson, JS Baba, JB Wilgen<br>WO Patent App. PCT/US2010/028,240   |      |
| <a href="#"><u>A case for non-invasive, awake, nonanesthetized, unrestrained imaging</u></a>   | 2009 |
| J Baba<br>Biomedical Science & Engineering Conference, 2009. BSEC 2009. First Annual ...   |      |
| <a href="#"><u>NOVEL MICROFABRICATED INSTRUMENTS AND METHODS TO TREAT RECURRENT CORNEAL EROSION</u></a>  | 2008 |
| CL Britton, BR D'urso, E Chaum, JT Simpson, JS Baba, MN Ericson, RJ Warmack<br>US Patent App. 12/052,971   |      |
| <a href="#"><u>Retinal instrument</u></a>  | 2008 |
| CL Britton, BR D'urso, E Chaum, JT Simpson, JS Baba, MN Ericson, RJ Warmack<br>US Patent App. 12/052,992   |      |
| <a href="#"><u>An implantable micro-sensor for real-time tissue perfusion monitoring.</u></a>  | 2005 |
| W Xu, MN Ericson, GL Cote, J Baba, CL Britton, MA Wilson<br>SHOCK 23, 89-89  |      |
| <a href="#"><u>Optical Diagnostics and Sensing V (Proceedings Volume)</u></a>  | 2005 |
| BL Ibey, VK Yadavalli, HR Thomas, RM Rounds, MV Pishko, GL Cote, F Liang, T ...  |      |
| <a href="#"><u>Application of polarization microscopy for the nonstained determination of myo-lamina morphology in the rat</u></a>   | 2004 |
| JS Baba, JC Criscione, KK Hudson, GL Cote<br>Biomedical Optics 2004, 111-114   |      |
| <a href="#"><u>Optical Diagnostics and Sensing IV (Proceedings Volume)</u></a>   | 2004 |
| VA Saptari, K Youcef-Toumi, J Zhang, JT Olesberg, L Liu, V Van Zee, MA ...   |      |
| <a href="#"><u>The application of polarization microscopy to the development of a non-staining technique for measuring the divergence angle of myocardial collagen cleavage planes</u></a> | 2003 |
| JS Baba, JC Criscione, K Hudson, GL Cote<br>Engineering in Medicine and Biology Society, 2003. Proceedings of the 25th ...   |      |
| <a href="#"><u>Optical Diagnostics and Sensing in Biomedicine III</u></a>  | 2003 |
| BL Ibey, MA Meledeo, VA Gant, V Yadavalli, MV Pishko, GL Cote, AK Amerov, MA ...   |      |

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