

ISSN 0022-3727

IOP

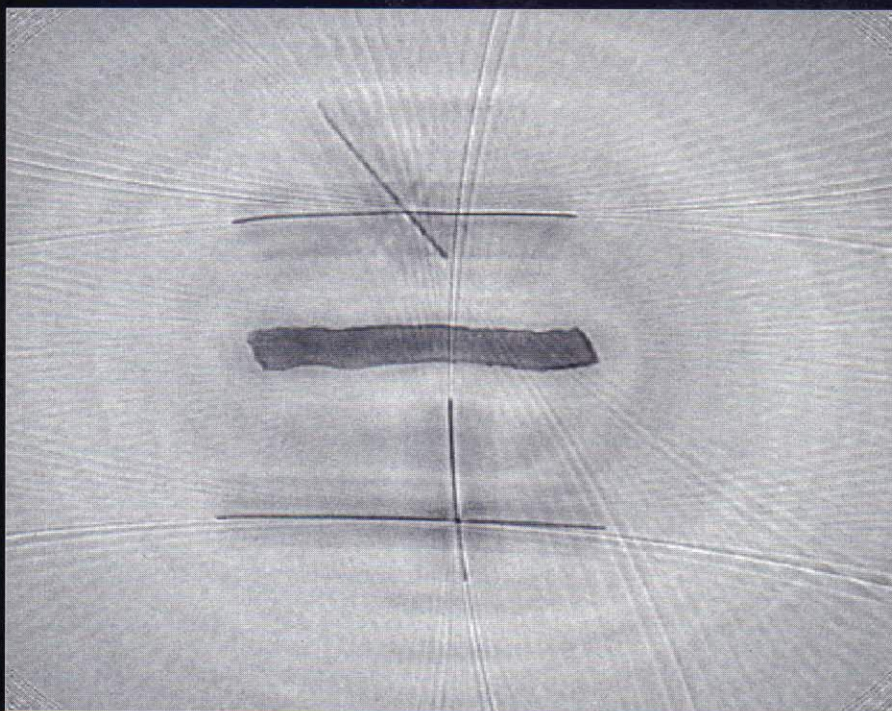
Journal of Physics D Applied Physics

Volume 38 Number 15 7 August 2005

Special issue on biomedical optics

Guest Editors: R K Wang, A V Priezhev and S Fantini

Online: www.iop.org/journals/jphysd



Institute of Physics PUBLISHING

Journal of Physics D: Applied Physics

Volume 38

Number 15

7 August 2005

SPECIAL ISSUE ON BIOMEDICAL OPTICS

EDITORIAL

Special issue in honour of Professor Valery V Tuchin's contribution to the field of biomedical optics

R K Wang, A V Priezzhev and S Fantini (Guest Editors)

PAPERS

- 2497 **Optical clearing of tissues and blood using the immersion method**
V V Tuchin
- 2519 **Theory, developments and applications of optical coherence tomography**
P H Tomlins and R K Wang
- 2536 **Development and evaluation of automated systems for detection and classification of banded chromosomes: current status and future perspectives**
X Wang, B Zheng, M Wood, S Li, W Chen and H Liu
- 2543 **Optical properties of human skin, subcutaneous and mucous tissues in the wavelength range from 400 to 2000 nm**
A N Bashkatov, E A Genina, V I Kochubey and V V Tuchin
- 2556 **Modelling optical properties of organic-mineral complexes in water ecosystems**
V N Lopatin, N V Shepelevich and I V Prostavkova
- 2564 **TiO₂ nanoparticles as an effective UV-B radiation skin-protective compound in sunscreens**
A P Popov, A V Priezzhev, J Lademann and R Myllylä
- 2571 **Microbubbles-overlapping mode for laser killing of cancer cells with absorbing nanoparticle clusters**
V P Zharov, R R Letfullin and E N Galitovskaya
- 2582 **Effect of red blood cell aggregation and sedimentation on optical coherence tomography signals from blood samples**
M Yu Kirillin, A V Priezzhev, V V Tuchin, R K Wang and R Myllylä
- 2590 **A naturally occurring contrast agent for OCT imaging of smokers' lung**
Y Yang, P O Bagnaninchi, S C Whiteman, D Gey van Pittius, A J El Haj, M A Spiteri and R K Wang
- 2597 **The effect of multiple scattering on velocity profiles measured using Doppler OCT**
J Moger, S J Matcher, C P Winlove and A Shore
- 2606 **Coherent noise-free ophthalmic imaging by spectral optical coherence tomography**
A Szkulmowska, M Wojtkowski, I Gorczynska, T Bajraszewski, M Szkulmowski, P Targowski, A Kowalczyk and J J Kaluzny
- 2612 **The collagen structure of equine articular cartilage, characterized using polarization-sensitive optical coherence tomography**
N Ugryumova, D P Attenburrow, C P Winlove and S J Matcher
- 2620 **Noise analysis of a white-light supercontinuum light source for multiple wavelength confocal laser scanning fluorescence microscopy**
G McConnell
- 2625 **Imaging of *Caenorhabditis elegans* samples and sub-cellular localization of new generation photosensitizers for photodynamic therapy, using non-linear microscopy**
G Filippidis, C Kouloumentas, D Kapsokalyvas, G Voglis, N Tavernarakis and T G Papazoglou
- 2633 **Real-time optoacoustic monitoring of temperature in tissues**
I V Larina, K V Larin and R O Esenaliev
- 2640 **A photoacoustic tomography system for imaging of biological tissues**
Y Su, F Zhang, K Xu, J Yao and R K Wang

(Continued on inside back cover)