

Dr. PAUL WYETH: Senior Lecturer in Conservation Science

Forthcoming:

MARGARITI, C., EASTOP, D., MORAITOU, G. and WYETH, P. 2009. Potentials and limitations on the application of FTIR microscopy on the characterisation and analysis of textiles excavated in Greece. *NESAT X 10th North European Symposium of Archaeological Textiles, Copenhagen, 14-17 May 2008*.

MARGARITI, C., EASTOP, D., MORAITOU, G. and WYETH, P. The application of analytical methods of investigation to textiles excavated in Greece: towards the development of an informed conservation strategy. *5th Hellenic Society of Archaeometry Symposium, Athens, 8-10 October 2008*.

Published:

KIM, J., ZHANG, X. and WYETH, P. 2008. The inherent acidic characteristics of aged silk. *e-Preservation Science*, 5, 41-46.

WYETH, P. 2008. Informing the conservation, display and long-term preservation of the *HMS Victory* Trafalgar sail. In: E. MAY, M. JONES and J. MITCHELL, eds. *Heritage Microbiology and Science – Microbes, Monuments and Maritime Materials*. Cambridge: RSC Publishing, 236-244.

RICHARDSON, E., MARTIN, G. and WYETH, P. 2008. On-site collections management: NIR characterisation and condition monitoring of modern textiles. In: J. TOWNSEND, L. TORIOLO and F. CAPPITELLI, eds. *Conservation Science 2007*. London: Archetype, 262-269.

GARSIDE, P. and WYETH, P. 2007. Crystallinity and degradation of silk: correlations between analytical signatures and physical condition on ageing. *Applied Physics A: Materials Science & Processing*, 89 (4), 871-876.

RICHARDSON, E., MARTIN, G., WYETH, P. and ZHANG, X. 2007. State of the Art: Non-invasive interrogation of textiles in museum collections. *Microchimica Acta*, 162 (3-4), 303-312.

RICHARDSON, E., MARTIN, G. and WYETH, P. 2007. Collecting a near infrared spectral database of modern textiles for use of on-site characterisation. In: M. HAYWARD and E. KRAMER, eds. *Textiles and Text: Re-establishing the Links Between Archival and Object-Based Research. Postprints of the Third AHRC Research Centre for Textile Conservation and Textile Studies Conference, 2006*. London: Archetype, 257-263.

GARSIDE, P. and WYETH, P. 2007. The use of polarized spectroscopy as a tool for examining the microstructure of cellulosic textile fibres. *Applied Spectroscopy*, 61 (5), 523-529.

ZHANG, X and WYETH, P. 2007. Moisture sorption as a potential condition marker for historic silks: Noninvasive determination by near-Infrared spectroscopy. *Applied Spectroscopy*, 61(2), 218-222.

HERMES, A.C., DAVIES, R.J., GRIEFF, S., KUTZKE, H., LAHLIL, S., WYETH, P and RIEKEL, C. 2006. Characterizing the decay of ancient Chinese silk fabrics by microbeam synchrotron radiation diffraction. *Biomacromolecules*, 7(3), 777-783.

MACDONALD, A. M. and WYETH, P. 2006. On the use of photobleaching to reduce fluorescence background in Raman spectroscopy to improve the reliability of pigment identification on painted textiles. *Journal of Raman Spectroscopy*, 37, 830-835.

EDWARDS, H. G. M., NIKHASSAN, N. F., FARWELL, D. W. GARSIDE, P. and WYETH, P. 2006. Raman spectroscopic analysis of a unique linen artefact: the *HMS Victory* Trafalgar sail. *Journal of Raman Spectroscopy*, 37, 1193-1200.

GARSDIE, P. and WYETH, P. 2006. Identification of cellulosic fibres by FTIR spectroscopy: differentiation of flax and hemp by polarized ATR FTIR. *Studies in Conservation*, 51(3), 205-211.

GARSDIE, P. and WYETH, P. 2006. Textiles. (Chapter 4.) In: E. MAY and M. JONES, eds. *Conservation Science: Heritage Materials*. Cambridge: Royal Society of Chemistry, 56-91.

GARSDIE, P. and WYETH, P. 2006. Identifying modern materials: taking it to the collection. In: C. ROGERSON and P. GARSDIE, eds. *The Future of the Twentieth Century: Collecting, Interpreting and Conserving Modern Materials*. AHRC Research Centre for Textile Conservation & Textiles Studies, Second Annual Conference. Textile Conservation Centre, 26-28 July 2005. London: Archetype, 55-60.

EDWARDS, H.G.M. and WYETH, P. 2005. Case study: ancient textile fibres. (Chapter 19.) In: H.G.M. EDWARDS and J.M. CHALMERS, eds. *Raman Spectroscopy in Art and Archaeology*. Cambridge: Royal Society of Chemistry, 304-324.

MACDONALD, A. M., VAUGHAN, A.S and WYETH, P. 2005. Application of confocal Raman spectroscopy to thin polymer layers on highly scattering substrates: a case study of synthetic adhesives on historic textiles. *Journal of Raman Spectroscopy*, 36(3), 185-191.

GARSDIE, P., LAHLIL, S. and WYETH, P. 2005. Characterization of historic silk by polarized attenuated total reflectance Fourier transform infrared spectroscopy for informed conservation. *Applied Spectroscopy*, 59 (10), 1242-1247.

GARSDIE, P., MILES, R., NAFTALY, M., STRINGER, M. and WYETH, P. 2005. Assessing near infrared and terahertz spectroscopy for the characterisation of organic heritage artefacts. In: PARISI, C., BUZZANCA, G. and PARADISI, A., eds. *Art '05. Proceedings of the 8th International Conference on Non-Destructive Investigations and Microanalysis for the Diagnostics and Conservation of the Cultural and Environmental Heritage. Lecce (Italy), 15-19 May 2005*. (Italian Society for Non-Destructive Testing Monitoring Diagnostics, Ministry of Cultural Heritage and Activities, Central Institute of Restoration & Department of Materials Science, University of Lecce.)Lecce: University of Lecce, 15-19. (CD-Rom format).

GREIFF, S., KUTZKE, H., LAHLIL, S., RIEKEL, C. and WYETH, P. 2005. Surveying silk fibre degradation by crystallinity determination: a study on the Tang-Dynasty silk treasure from Famen temple, China. In: R. JANAWAY and P. WYETH, eds. *Scientific Analysis of Ancient & Historic Textiles. Informing Preservation, Display and Interpretation. Postprints, AHRB Research Centre for Textile Conservation & Textile Studies, Second Annual Conference. Textile Conservation Centre, 13-15 July 2004*. London: Archetype Press, 38-43.

GARSDIE, P. and WYETH, P. 2005. Assessing the physical state of the fore-topsail of HMS Victory. In: R. JANAWAY and P. WYETH, eds. *Scientific Analysis of Ancient & Historic Textiles. Informing Preservation, Display and Interpretation. Postprints, AHRB Research Centre for Textile Conservation & Textile Studies, Second Annual Conference. Textile Conservation Centre, 13-15 July 2004*. London: Archetype Press, 118-125.

WYETH, P. 2005. Signatures of ageing: correlations with behaviour. In: R. JANAWAY and P. WYETH, eds. *Scientific Analysis of Ancient & Historic Textiles. Informing Preservation, Display and Interpretation. Postprints, AHRB Research Centre for Textile Conservation & Textile Studies, Second Annual Conference. Textile Conservation Centre, 13-15 July 2004*. London: Archetype Press, 137-142.

MACDONALD, A.M., ROGERSON, C. and WYETH, P. 2005. Raman microspectroscopy interrogating 19th and 20th century painted Trades Union banners. In: R. JANAWAY and P. WYETH, eds. *Scientific Analysis of Ancient & Historic Textiles. Informing Preservation, Display and Interpretation. Postprints, AHRB Research Centre for Textile Conservation & Textile Studies, Second Annual Conference. Textile Conservation Centre, 13-15 July 2004*. London: Archetype Press, 222-229.

WYETH, P. and JANWAY, R., eds. 2005. *Scientific Analysis of Ancient & Historic Textiles. Informing Preservation, Display and Interpretation. Postprints, AHRB Research Centre for Textile Conservation & Textile Studies, Second Annual Conference. Textile Conservation Centre, 13-15 July 2004.* London: Archetype Press.

WYETH, P. 2004. Tensile testing of buried cotton samples. In: PALMA, P., ed. *Final Report on the EU Culture 2000 project: Monitoring, Safeguarding and Visualizing North-European Shipwreck Sites*, Helsinki: The National Board of Antiquaries, 29-32.

GARSDIE, P. and WYETH, P. 2004. Polarised ATR-FTIR characterisation of cellulosic fibres in relation to historic artefacts. *Restaurator*, 25, 249-259.

WYETH, P. 2003. The fiber database as a web-accessible tool for teaching and research. In: J. MERRITT, ed., *Proceedings of the Conference "Development of a Web-accessible reference library of deteriorated fibers using digital imaging and image analysis, April 3-6, 2003"*, Harpers Valley Centre, USA: National Park Service, 68-69.

GARSDIE, P. and WYETH, P. 2003. Identification of cellulosic fibres by FTIR Spectroscopy I: Thread and single fibre analysis by attenuated total reflectance. *Studies in Conservation*, 48, (4), 269-275.

MACDONALD, A. M., VAUGHAN, A.S and WYETH, P. 2003. On confocal Raman spectroscopy of semicrystalline polymers: The effect of optical scattering. *Applied Spectroscopy*, 57 (12), 1475-1481.

MACDONALD, A. M., WYETH, P. and ROGERSON, C. 2003. Raman Spectroscopy. Interrogating historic painted textiles. *Microscopy and Analysis*, 97, 5-7.

CHANG, L. and WYETH, P. 2002. Chemical Finishes on indigo-dyed Cloth: Characterization of Miao and Mao-related costume for Guizhou, China. In: V.J. WHELAN, ed. *Strengthening the Bond: Science and Textiles. North American Textile Conservation Conference 2002 Preprints*. Philadelphia: NATCC, 25-34.

GARSDIE, P. and WYETH, P. 2002. Monitoring the deterioration of historic textiles: developing appropriate micromethodology. *Postprints, Conservation Science*, 2002, May 22-24. Edinburgh: NMS, 171-176.

GARSDIE, P. and WYETH, P. 2002. Characterization of silk deterioration. In: V.J. WHELAN, ed. *Strengthening the Bond: Science and Textiles. North American Textile Conservation Conference 2002 Preprints*. Philadelphia: NATCC, 55-60.

TAKAMI, M. and WYETH, P. 2002. Studies on a Korean painted silk banner: identification of layer structure, binding medium and pigments. In: V.J. WHELAN, ed. *Strengthening the Bond: Science and Textiles. North American Textile Conservation Conference 2002 Preprints*. Philadelphia: NATCC, 135-44.

GARSDIE, P. and WYETH, P. 2000. Polarised-atr-ftir characterisation of cellulosic fibres in relation to historic artefacts. *E-MRS Paper Reference*, K-IV.6.

GARSDIE, P. and WYETH, P. 2000. Characterisation of plant fibres by infra-red spectroscopy. *Polymer Preprints*, 41 (2), 1792-1793.