

Recent Advances in Characterizing Asian Lacquer

Center for Conservation and Preservation, Yale University, July 15 – 19, 2013

COURSE BIBLIOGRAPHY

- Baumer, Ursula, Patrick Dietemann, and Johann Koller. 2009. Identification of resinous materials on 16th and 17th century reverse-glass objects by gas chromatography/mass spectrometry. *International Journal of Mass Spectrometry* (284): 131-141.
- Bonaduce, Ilaria, Catharina Blaensdorf, Patrick Dietemann, and Maria Perla Colombini. 2008. The binding media of the polychromy of Qin Shihuang's terracotta army. *Journal of Cultural Heritage* 9 (1): 103-108.
- Burmester, A. 1983. Far Eastern lacquers: classification by pyrolysis mass spectrometry. *Archaeometry* 25 (1): 45-58.
- Chiavari, G., and R. Mazzeo. 1999. Characterization of paint layers in Chinese archaeological relics by pyrolysis-GC-MS. *Chromatographia* 49 (5-6): 268-272.
- █ de la Rie, E. Renè. 1982. Fluorescence of paint and varnish layers (Part II). *Studies in Conservation* 27 (2): 65-69.
- █ de la Rie, E. Renè. 1982. Fluorescence of paint and varnish layers (Part III). *Studies in Conservation* 27 (3): 102-108.
- █ █ Derrick, Michele, Luiz Souza, Tanya Kieslich, Henry Florsheim, and Dusan Stulik. 1994. Embedding paint cross-section samples in polyester resins: problems and solutions. *Journal of the American Institute for Conservation* 33 (3): 227-245. <http://cool.conservation-us.org/jaic/articles/jaic33-03-001.html>
- Derrick, Michele R., C. Grzywacz, and F. Preusser. 1988. FTIR analysis of finishes on Oriental style 18th century European furniture. In *Urushi: Proceedings of the Urushi Study Group, June 10-27, 1985, Tokyo*, edited by N.S. Brommelle and P. Smith, 227-234. Los Angeles: The Getty Conservation Institute.
- █ Frade, J.C., M.I. Ribeiro, J. Graca, and J. Rodrigues. 2009. Applying pyrolysis-gas chromatography/mass spectrometry to the identification of oriental lacquers: Study of two lacquered shields. *Analytical and Bioanalytical Chemistry*: 2167-2174.

BIBLIOGRAPHY CONT'D.

- Garner, Sir Harry. 1963. Technical studies of Oriental lacquer. *Studies in Conservation* 8 (3): 84-98.
- He, Ling, Maiqian Nie, Giuseppe Chiavari, and Rocco Mazzeo. 2007. Analytical characterization of binding medium used in ancient Chinese artworks by pyrolysis-gas chromatography/mass spectrometry. *Microchemical Journal* 85 (2): 347-353.
- ॥ Heginbotham, Arlen, Herant Khanjian, Rachel Rivenc, and Michael Schilling. 2008. A procedure for the efficient and simultaneous analysis of Asian and European lacquers in furniture of mixed origin. In *15th Triennial Conference, New Delhi, 22-26 September 2008: Preprints (ICOM Committee for Conservation)*, edited by Janet Bridgland, 608-616. New Delhi: Allied Publishers.
- ॥ Heginbotham, Arlen, and Michael Schilling. 2011. New Evidence for the use of Southeast Asian raw materials in seventeenth-century Japanese export lacquer. In *East Asian Lacquer: Material Culture, Science and Conservation*, edited by Shayne Rivers, Rupert Faulkner and Boris Pretzel, 92-106. London: Archetype Publications.
- Honda, T., N. Kitano, Y. Kamiya, R. Lu, and T. Miyakoshi. 2008. Identification of excavated black lacquer resin by pyrolysis-gas chromatography/mass spectrometry. *18th International Symposium for Analytical and Applied Pyrolysis* 23.
- ॥ Honda, T., R. Lu, N. Kitano, Y. Kamiya, and T. Miyakoshi. 2010. Applied analysis and identification of ancient lacquer based on pyrolysis-gas chromatography/mass spectrometry. *Journal of Applied Polymer Science* 118: 897-901.
- Honda, T., R. Lu, R. Sakai, T. Ishimura, and T. Miyakoshi. 2008. Characterization and comparison of Asian lacquer saps. *Progress in Organic Coatings* 61: 68-75.
- Honda, T., X. Ma, R. Lu, D. Kanamori, and T. Miyakoshi. 2011. Preparation and characterization of a new lacquer based on blending urushiol with thitsiol. *Journal of Applied Polymer Science* 121: 2734-2742.
- ॥ Johnson, Meryl, and Elisabeth Packard. 1971. Methods used for the identification of binding media in Italian paintings. *Studies in Conservation* 16 (4): 145-164.
- Judet-Brugier, Nicole. 2000. From Asia to Europe: Asian lacquerware applied to French furniture. In *Ostasiatische und europäische Lacktechniken / East Asian and*

BIBLIOGRAPHY CONT'D.

- European lacquer techniques*, edited by Michael Kühenthal, 47-50. Munich: Bayerisches Landesamt für Denkmalpflege.
- Kamiya, Y., and T. Miyakoshi. 2000. The analysis of urushi by pyrolysis-gas chromatography and mass spectrometry. In *East Asian and European Lacquer Techniques: International Conference of the Bavarian State Department of Historical Monuments and the German National Committee of ICOMOS Together with the Tokyo National Research Institute of Cultural Properties, Munich, 11-13 March 1999*, edited by Michael Kuhenthal, 107-120. Munich: Bayerischen Landesamtes fur Denkmalpflege.
- 📖 Khandekar, N. 2003. Preparation of cross-sections from easel paintings. *Reviews in Conservation* (4): 52-64.
- 📖 Koller, Johann, and Ursula Baumer. 1997. Baroque and Rococo transparent gloss lacquers: II. Scientific study of lacquer systems. In *Lacke des Barock und Rokoko / Baroque and Rococo lacquers*, edited by Katharina Walch and Johann Koller, 53-84. Munich: Bayerisches Landesamt für Denkmalpflege.
- 📖 Koller, Johann, Katharina Walch, and Ursula Baumer. 2000. French lacquered furniture of the 18th Century: Criard, Desforge and Dubois. A technical and scientific investigation on imitation lacquers. In *Japanische und europäische Lackarbeiten: Rezeption, Adaption, Restaurierung / Japanese and European Lacquerware: Adoption, Adaptation, Conservation*, edited by Michael Kühenthal, 537-559. Munich: Bayerisches Landesamt für Denkmalpflege.
- 📖 Kumanotani, J. 1995. Urushi (oriental lacquer) - a natural aesthetic durable and future-promising coating. *Progress in Organic Coatings* 26: 163-195.
- 📖 Le Ho, A.S., M. Regert, O. Marescot, C. Duhamel, J. Langlois, T. Miyakoshi, C. Genty, and M. Sablier. 2012. Molecular criteria for discriminating museum Asian lacquerware from different vegetal origins by pyrolysis gas chromatography/mass spectrometry. *Analytica Chimica Acta* 710: 9-16.
- Lu, R., Y. Kamiya, and T. Miyakoshi. 2006. Applied analysis of lacquer films based on pyrolysis-gas chromatography/mass spectrometry. *Talanta* 70: 370-376.
- Lu, R., Y. Kamiya, and T. Miyakoshi. 2007. Characterization of lipid components of *Melanorrhoea usitata* lacquer sap. *Talanta* 71: 1536-1540.
- 📖 Martin, Elisabeth. 1977. Some improvements in techniques of analysis of paint media. *Studies in Conservation* 22 (2): 63-67.

BIBLIOGRAPHY CONT'D.

- Niimura, N., and T. Miyakoshi. 2000. Identification of oriental lacquer films using pyrolysis-gas chromatography/mass spectrometry. In *Japanische und europäische Lackarbeiten: Rezeption, Adaption, Restaurierung / Japanese and European Lacquerware: Adoption, Adaptation, Conservation*, edited by Michael Kühenthal, 123-134. Munich: Bayerischen Landesamtes fur Denkmalpflege.
- Niimura, N., and T. Miyakoshi. 2003. Characterization of natural resin films and identification of ancient coating. *Journal of the Mass Spectrometry Society of Japan* 51 (4): 439-457.
- Niimura, N., T. Miyakoshi, J. Onodera, and T. Higuchi. 1999. Identification of ancient lacquer film using two-stage pyrolysis-gas chromatography/mass spectrometry. *Archaeometry* 41 (1): 137-149.
- Okada, F. 2000. A study on the structure of the coating film of urushiware at the Linden Museum. In *Japanische und europäische Lackarbeiten: Rezeption, Adaption, Restaurierung / Japanese and European Lacquerware: Adoption, Adaptation, Conservation*, edited by Michael Kühenthal, 135-148. Munich: Bayerischen Landesamtes fur Denkmalpflege.
- Ostwald, W. 1936. Iconoscopic studies I: Microscopic identification of homogenous binding mediums. *Technical Studies in the Field of the Fine Arts* 4 (3): 135-144.
- Piert-Borgers, B. 2000. East Asian lacquerwork on French furniture. In *Japanische und europäische Lackarbeiten: Rezeption, Adaption, Restaurierung / Japanese and European Lacquerware: Adoption, Adaptation, Conservation*, edited by Michael Kühenthal, 479-516. Munich: Bayerisches Landesamt für Denkmalpflege.
- Pitthard, V., S. Wei, S. Miklin-Kniefacz, S. Stanek, M. Griesser, and M. Schreiner. 2010. Scientific investigations of antique lacquers from a 17th-century Japanese ornamental cabinet. *Archaeometry* 52 (6): 1044-1056.
- Plesters, J. 1956. Cross-sections and chemical analysis of paint samples. *Studies in Conservation* 2 (3): 110-157.
- Schellmann, N. 2011. Delamination and flaking of East Asian export lacquer coatings on wood substrates. In *East Asian Lacquer: Material Culture, Science and Conservation*, edited by Shayne Rivers, Rupert Faulkner and Boris Pretzel, 107-120. London: Archetype.
- Schellmann, N. 2012. Review of damage to East Asian lacquer objects. In

BIBLIOGRAPHY CONT'D.

Consolidation of Stressed and Lifting Decorative Coatings on Wood – The effect of consolidant choice on the structural integrity of multilayered East Asian lacquer coatings with gesso-type foundation layers, Chapter 3, 31-76. Ph.D. diss.: Academy of Fine Arts Dresden.

- Schramm, Hans-Peter, and Bernd Hering. 1988. Nachweis natürlicher organischer bindemittel. In *Historische Malmaterialien und ihre Identifizierung [Historical painting materials and their identification]*, 205, 217-218. Graz: Akademische Druck und Verlagsanstalt.
- Wachowiak, Melvin J., Jr. 2004. Efficient new methods for embedding paint and varnish samples for microscopy. *Journal of the American Institute for Conservation* 43 (3): 205-260.
<http://cool.conservation-us.org/jaic/articles/jaic43-03-001.html>
- Wan, Y., R. Lu, Y. Du, T. Honda, and T. Miyakoshi. 2007. Does Donglan Lacquer tree belong to *Rhus vernicifera* species? *International Journal of Biological Macromolecules* 41: 497-503.
- Webb, M. 2011. The autofluorescence of Asian lacquer. In *East Asian Lacquer: Material Culture, Science and Conservation*, edited by Shayne Rivers, Rupert Faulkner and Boris Pretzel, 148-158. London: Archetype.
- Wei, S., V. Pintus, V. Pitthard, M. Schreiner, and G. Song. 2011. Analytical characterization of lacquer objects excavated from a Chu tomb in China. *Journal of Archaeological Science* 38: 2667-2674.

■ = Essential reading material

□ = Available online

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