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Technical Program / Technical Papers

The following is an abbreviated list of presentations that refer to Tekran equipment. The papers either directly discuss analytical advances developed in whole or in part by Tekran, describe results obtained using Tekran equipment, or discuss models developed using data obtained, in part, by our equipment.

Many of these papers were full 15 minute oral presentations, however some of them were posters. We apologize in advance for any errors or omissions in this list. Papers shown in **red** have Tekran staff listed as co-authors.

It will likely take years until these papers see the light of day. Keep checking with the conference website to track the paper publishing progress.

ATMOSPHERIC: EMISSIONS / EXCHANGE

1. **Assessing the Contribution of Natural Sources to Regional Atmospheric Mercury Budgets**, Gustin, M.S. and Lindberg, S.E.
2. **Mercury Water-Air Exchange over the Upper St. Lawrence River and the Lake Ontario**, Poissant, L., Amyot, M., Pilote, M. and Lean, D.

ATMOSPHERIC: EMISSIONS / EXCHANGE

1. **Utilization of Event Precipitation Data to Source Apportion Mercury Wet Deposited in South Florida**, Dvonch, J.T.; Keeler, G.J.; Graney, J.R. and Marsik, F.J. **(MOAE 3)**
2. **The Measurement of Volatile Metals Air Surface Exchange Rates Over Natural Settings**, Edwards, G.C.; Rasmussen, P.E.; Schroeder, W.H.; Kemp, R.J. and Fitzgerald-Hubble, C. **(MOAE 4)**
3. **Desert Storms: A Field Inter-Comparison of Methods Utilized for Measurement of Mercury Flux from Terrestrial Landscapes**, Gustin, M.S.; Lindberg, S.E.; Allan, M.A.; Ebinghaus, R.; Edwards, G.; Majewski, M.; Marsik, F.; Poissant, L.; Rasmussen, P.; Schaedlich, F.; Sommar, J.; Turner, R.; Vette, A. and Wallschlaeger, D. **(MOAE 6)**
4. **Airborne Emissions of Mercury from Municipal Landfill Operations: A Short-Term Measurement Study in Florida**, Lindberg, S.E. and Price, J.L. **(MOAE 7)**
5. **Ambient Mercury Monitoring in Beijing China**, Liu, S.; Carley, R.J.; Lin, Y. and Chen, L. **(MOAE 8)**

SOILS

1. **Mercury Distribution in Surface Soils from Central Amazon**, Silva Filho, E.V.; Ribeiro Jr. M.G. ; Cordeiro, R.C.; Souza M.; Pedlovisky, M.A. and Lacerda, L.D. **(MOSO 5)**

SEDIMENTS: DISTRIBUTION

1. **Production and Release of Methyl Mercury as a Result of Marine Sediment Dredging Activities**, Bloom, N.S. and Lasorsa, B.K. **(MPSD 2)**
2. **Mercury Distribution in Surface Sediments in the Sepetiba Bay, Rio de Janeiro State, SE Brazil**, Silva Filho, E.V.; Veeck, L.; Cardoso, A.G.A.; Wasserman, J. and Lacerda, L.D. **(MPSD 9)**

BIOGEOCHEMISTRY / CYCLING / GEOLOGY

1. **Methylmercury and Mercury Deposition and Export in a Boreal Catchment**, Lee, Y.H.; Bishop, K.H. and Munthe, J. **(MPBC 5)**

ANALYTICAL CHEMISTRY: QUALITY CONTROL / QUALITY ASSURANCE

1. **Comparison of Analytical Methods for the Determination of Low Level Mercury and Other Trace Metals in Coal**, Bloom, N. S. **(MPANQ 2)**
2. **Intercomparison for Atmospheric Mercury Measurements in Tuscany, Italy, 27th of June to 3rd of July, 1998**, Iverfeldt, Å.; Munthe, J.; Ferrara, R.; Pirrone, N.; Berg, T.; Costa, P.; Ebinghaus, R.; Kock, H.; Sommar, J.; Feng, X.; Gårdefelt, K.; Stevens, R.; Keeler, G.; Mamane, Y.; Tuncel, G.; Nucaro, E.; Sprovieri, F.; Lanzillotta, E.; Schmolke, S.; Urba, A. and Wängberg, I. **(MPANQ 7)**

ATMOSPHERIC: EMISSIONS / EXCHANGE

1. **The Influence of Local Atmospheric Mercury Sources on Mercury Levels Measured in Urban Runoff**, Gildemeister, A.E.; Graney, J.; Keeler, G.J.; Atassi, K. and Hufnagel, C. **(MPAE 1)**
2. **Lab Study of Process of Mercury Emission at Soil Surface Using Field and modified Flux Chambers**, Zhang, H. and Lindberg, E. **(MPAE 4)**

ATMOSPHERIC: AIR MEASUREMENTS

1. **Mercury Atmospheric Deposition to Northern South America During the Last 1,000 Years**, Lacerda, L.D.; Ribeiro Jr., M.G.; Cordeiro, R.C.; Turcq, B. and Sifeddine, A.
2. **Hg Speciation in a Simulated Coal Combustion Plume**, Prestbo, E.M.; Calhoun, J.A.; Brunette, R.C. and Palidini, M.
3. **Is Mercury Vapor Depleted Silently in the Spring in the Arctic?** Schroeder, W.; Anlauf, K.; Hayden, K.; Hudec, V.; Lamborg, C.; Lu, J.; Schneeberger, D.; Steffen, A. and Vandal, G.

ANALYTICAL CHEMISTRY: ATMOSPHERIC

1. **Concentrations and Behavior of Reactive Gaseous Mercury in Ambient Air: Initial Tests of an Automated Sampling Approach**, Lindberg, S.E.; Stratton, W.J.; Prestbo, E.; Keeler, G.; Stevens, R.; Schaedlich, F. and Atkeson, T.
2. **A Novel Device for Sampling and Analysis of Particulate-Phase Mercury in Ambient Air**, Lu, J.Y. and Schroeder, W.H.
3. **Design and Performance of an Atmospheric Reference Standard of Hg⁰ and HgCl₂ and its Use to Evaluate Several State-of-the-Art Hg Speciation Measurement Methods**, Prestbo, E.M.; Stevens, R.K.; Lindberg, S.; Schaedlich, F.A.; Schneeberger, D.R. and Keeler, G.
4. **Automated Instrument Designed to Measure Hg⁰ and Reactive Gaseous Mercury in Near Real Time: Design and Operational Characteristics**, Stevens, R.K.; Schaedlich, F.H.; Schneeberger, D.R.; Prestbo, E.; Lindberg, S. and Keeler, G.

ANALYTICAL CHEMISTRY: ATMOSPHERIC

1. **Development and Application of Methods for Sampling and Analysis of Atmospheric Mercury Species**, Munthe, J.; Wängberg, I.; Sommar, J.; Nucaro, E.; Feng, X.; Gårdfelt, K.; Iverfeldt, Å. and Pirrone, N. **(TOANA 1)**

BIOTA / FOOD CHAIN / BIOACCUMULATION / BIOMMONITORING

1. **Preliminary Data on Mercury Distribution in Two Shark Species from the South Atlantic Coast**, Paraquetti, H.H.M.; Marins, R.V.; Rezende, C.E. and Lacerda, L.D. **(TOBI 7)**

ANALYTICAL CHEMISTRY: ATMOSPHERIC

1. **Determination of Gaseous Divalent Mercury in the Ambient Air Using Thermally Regenerable KCl Coated Denuders**, Feng, X.; Sommar, J. and Lindqvist, O. **(TPANA 2)**

ATMOSPHERIC: CHEMISTRY / MODELING

1. **Current Research on Atmospheric Mercury in the European Union: The MAMCS Project**, Pirrone, N.; Ferrara, R.; Kallos, G.; Mamane, Y., Munthe, J. and Pacyna, J.M.
2. **Current Research on Atmospheric Mercury in the European Union: The MOE Project**, Iverfeldt, Å.; Ebinghaus, R.; Larjava, K.; Lindqvist, O.; Munthe, J. and Petersen, G.
3. **A Comprehensive Eulerian Modeling Framework for Airborne Mercury Species: Model Development and Applications in Europe and North America**, Petersen, G.; Bloxam, R.; Krueger, O. and Wong, S.

SEDIMENTS: DISTRIBUTION

1. **Elevated Mercury Levels in the Amazon Basin: Antropogenic or Natural**, Miller, J.R., Lechler, P.J., Lacerda, L.D., Bonzongo, J.C., Vinson, D., Lyons, W.B. and Warwick, J.J.

ATMOSPHERIC: EMISSIONS / EXCHANGE

1. **Natural Mercury Sources: Gaseous Emissions from Subtropical Wetlands in the Florida Everglades**, Lindberg, S.E. and Meyers, T.P.
2. **The Potential Importance of Dew, Frost, Fog and Cloud Water to the Environmental Mercury Cycle**, Malcolm, E. and Keeler, G.

ATMOSPHERIC: AIR MEASUREMENTS

1. **Long Term Measurements of Total Gaseous Mercury at Mace Head, Ireland**, Ebinghaus, R.; Kock, H.H.; Jennings, S.G.; Coggins, A.M. and Spain, T.G. **(WOAA 4)**
2. **Assessing the Atmospheric Deposition of Mercury to Lake Michigan: The Importance of the Chicago / Gary Urban Area on Wet and Dry Deposition**, Landis, M.S. and Keeler, G.J. **(WOAA 5)**
3. **The Connecticut Atmospheric Mercury Monitoring Program**, Perkins, C.R.; Carley, R.J. and Liu, S. **(WOAA 6)**
4. **Mercury Flux Measured in Rural Sites in Québec**, Poissant, L.; Pilote, M. and Casimir, A. **(WOAA 7)**
5. **Simultaneous Measurements of Atmospheric Mercury at Four Sites on a 800 km South-to-North Transect in Summer '95 and Winter '97**, Schmolke, S.R.; Ebinghaus, R.; Schroeder, W.H.; Kock, H. and Munthe, J. **(WOAA 8)**
6. **The Canadian Atmospheric Mercury Network (CAMNET): Initial Results**, Schroeder, W.; Beauchamp, S.; Belzer, W.; Blanchard, P.; Froude, F.; Martin, B., McDonald, K.; Orr, D.; Poissant, L.; Schneeberger, D.; Steffen, A.; Thomson, B.; Tordon, R. and Waite, D. **(WOAA 9)**
7. **Mercury Concentrations in Bulk Atmospheric Deposition Over the Coast of Rio de Janeiro, SE Brazil**, Silva, L.F.F.; Ribeiro Jr., M.G.; Silva Filho, E.V.; Paraquetti, H.M.; Ayres, G.A.; Torres, E.R.S.; Rezende, C.E. and Lacerda, L.D. **(WOAA 10)**
8. **Wet Deposition of Mercury in the U.S. and Canada: Results from the Mercury Deposition Network (MDN)**, Sweet, C.W.; Prestbo, E. and Brunette, B. **(WOAA 11)**

FRESH WATERS

1. **Measurements of Atmospheric and Surface-Water Mercury Concentrations for Lake Superior**, Steffen, A., Schroeder, W.H., Lawson, G.S. and Strachan, W.M.J. **(WOFW 1)**
2. **Colloidal Phase Mercury Partitioning in Rivers from Contrasting Watersheds**, Andren, A.W., Babiarz, C.L., Hurley, J.P., Hoffmann, S.R., Shafer, M.M. and Armstrong, D.E. **(WOFW 2)**
3. **The Efficacy of Tangential-Flow Ultra filtration for Fresh Water Partitioning Studies of Total and Methylmercury**, Babiarz, C.L., Shafer, M.M., Hoffmann, S.R., Hurley, J.P., Armstrong, D.E. and Andren, A.W. **(WOFW 3)**

SEDIMENTS: HISTORICAL TRENDS

1. **Variation in the Mercury Concentration in Sediment Core from a Remote Lake in Maranhão State, NE Brazil**, Ribeiro Jr, M.G.; Cordeiro, R.C.; Capitâneo, J.L., Silva, A.O.; Aguiar, H.G.M.; Zocatelli, R.O.; Sifeddine, A.; Turcq, B. and Lacerda, L.D. **(WOSH 1)**
2. **Mercury Distribution in Surface Sediments of Mangrove Ecosystem on Sepetiba Bay, Rio de Janeiro State, SE — Brazil**, Silva, L.F.F., Lisboa F^o, S.D.; Ribeiro Jr., M.G.; Fonseca, R.M.; Chio, A.F. and Lacerda, L.D. **(WOSH 4)**
3. **Mercury Burden Inferred by Sediment Cores in a Mangrove Ecosystem on Sepetiba Bay, Rio de Janeiro State, SE — Brazil**, Silva, L.F.F., Lisboa F^o, S.D.; Ribeiro Jr., M.G. and Lacerda, L.D. **(WOSH 5)**
4. **Contemporary and Historical Eolian Depositional Fluxes of Mercury: Archival Records in Ombrotrophic Bogs and Lake Sediments from Nova Scotia and New Zealand**, Fitzgerald, W.F.; Lamborg, C.H.; Damman, A.W.H.; Benoit, J.M. and Balcom, P.H. **(WOSH 7)**
5. **Tests of the Fidelity of Lake Sediment Core Records of Mercury Deposition to Known Histories of Mercury Contamination**, Lockhart, W.L.; Macdonald, R.W.; Outridge, P.M.; Wilkinson, P.; DeLaronde, J.B. and Rudd, J.W.M. **(WOSH 8)**
6. **Mercury Accumulation in Iron Enriched Layers in a Human Constructed Barrage, Alta Floresta City, Mato Grosso State, Brazil**, Ribeiro Jr, M.G., Coelho, S.M. and Lacerda, L.D. **(WOSH 10)**

SEDIMENTS: HISTORICAL TRENDS

1. **Mercury Distribution in Lake Sediment Cores in the Northern Region of Rio de Janeiro State, Brazil: Recordings of Use of Organo-Mercurial Pesticides in the Sugar Cane Plantation**, Ribeiro Jr., M.G., Rezende, C.E., Fonseca, R.M., Chio, A.F. and Lacerda, L.D. **(WPSH 1)**
2. **Mercury and Lead Accumulation in Peat Bog Cores Collected in a Remote Lake: Recordings of Industrialization on the Southeastern of Brazil**, Ribeiro Jr., M.G.; Coelho, S.M., Sella, S.M. and Lacerda, L.D. **(WPSH 2)**

ATMOSPHERIC: AIR MEASUREMENTS

1. **Mercury in Rain Water Particulate Material on a Coastal Sub-Tropical Region in SE Brazil**, Silva Filho, E.V.; Paiva, R.P.; Wasserman, J.C.; Moutella, A.C.C. and Lacerda, L.D. **(WPAA 1)**
2. **Vertical Distribution of Total Gaseous Mercury in Canada**, Banic, C.M.; Schroeder, W.H. and Steffen, A. **(WPAA 2)**
3. **Total Gaseous Mercury Trends in Québec**, Poissant, L.; Casimir, A.; Demers, M.; Harvey, B. and Pilote, M. **(WPAA 3)**
4. **Aircraft Measurements of Atmospheric Mercury over South and East Germany**, Ebinghaus, R.; Kock, H.H. and Slemr, F. **(WPAA 5)**
5. **Mercury Speciation in the Urban and Rural Atmosphere: Measurement and Models**, Sheu, G.-R. and Mason, R.P. **(WPAA 9)**
6. **Studies of Reactive Gaseous Mercury in Ambient Air**, Stratton, W.J. and Lindberg, S.E. **(WPAA 10)**

ATMOSPHERIC: EMISSIONS / EXCHANGE

1. **Do Trees Accurately Record Atmospheric Emissions of Mercury Vapor from Nearby Point Sources?** Turner, R.R. and Bloom, N.
2. **Estimates of the Air-Sea Exchange of Gaseous Mercury in the Southern Baltic Sea, Summer and Winter 1997 — 1998**, Wängberg, I.; Schmolke, S.R.; Ebinghaus, R.; Munthe, J.; Schager, P. and Iverfeldt, A.

COASTAL WATERS

1. **The Atmospheric Cycling and Air-Sea Exchange of Mercury Species in the South and Equatorial Atlantic Ocean**, Lamborg, C.H.; Rolfhus, K.R.; Fitzgerald, W.F.; Kim, G. and Mason, R.P.
2. **Factors Controlling Mercury and Methylmercury Fate and Transport in Small and Large Watersheds**, Lawson, N.M.; Mason, R.P.; Benoit, J.M. and Gilmour, C.C.
3. **The Air-Water Exchange of Mercury to the Chesapeake Bay**, Mason, R.P.; Sheu, G.-R. and Lawson, N.M.
4. **The Distribution and Behavior of Reactive Mercury in the Connecticut River Estuary**, Rolfhus, K.R. and Fitzgerald, W.F.

ANALYTICAL CHEMISTRY: SPECIATION

1. **Analysis and Stability of Mercury Speciation in Petroleum Hydrocarbons**, Bloom, N.S

COASTAL WATERS

1. **Mercury Cycling and Emissions From Long Island Sound, U.S.A.**, Vandal, G. M.; Rolfhus, K.R.; Lamborg, C.H.; Russ, C.S. and Fitzgerald, W.F.

COASTAL WATERS

1. **Mercury Distribution in Coastal Lagoons of Rio de Janeiro State, Brazil**, Gonçalves, G.O. and Lacerda., L.D. **(HOCW 1)**
2. **The Role of Organic Matter in Controlling the Bioavailability of Mercury to the Estuarine Amphipod *Leptocheirus plumulosus***, Lawrence, A.L. and Mason, R.P. **(HOCW 4)**
3. **Mercury Distribution and Reactivity in Waters of a Subtropical Coastal Lagoon, Sepetiba Bay, SE Brazil**, Paraquetti, H.H.M.; Marins, R.V.; Ayres, G.A. and Lacerda, L.D. **(HOCW 6)**

COASTAL WATERS

1. **Biogeochemical Cycling of Methylmercury in Two Connecticut Salt Marshes**, Russ, C.S.; Fitzgerald, W.F. and Vandal, G.M. **(HPCW 4)**

ANALYTICAL CHEMISTRY: SPECIATION

1. **Determination of Methyl Mercury (MeHg) in Whole Blood by Ethylation / GC / CVAFS After Alkaline Digestion / Solvent Extraction**, Liang, L.; Evens, C.; Lazoff, S.; Woods, J.S.; Cernichiari, E.; Horvat, M. and DeRouen, T. **(HPANS 2)**