

Graham Bench: Selected Publications

DNA and total protamine masses in individual sperm from fertile mammalian subjects

Bench, G.S., Friz, A.M., Corzett, M.H., Morse D.H. and Balhorn, R.
Cytometry, **23**, (1996), 263-271

3-Dimensional Elastic Recoil Detection Analysis of Hydrogen in Materials for use in the Yucca Mountain Nuclear Waste repository

Sideras-Haddad, E., Heikkinen, D.W., Connell, S.H., Caffee, M.W., Roberts, M.L.,
Bench, G., Morse, D.H., Meike, A. and Bourcier, W.
Nuclear Instruments and Methods, **B130**, (1997), 259-263

Calcium and Potassium Inhibit Barrier recovery after disruption, Independent of the type of insult

Moa-Qiang, M., Mauro, T., Bench, G., Warren, R., Elias, P.M., and Feingold, K.B.
Experimental Dermatology, **6**, (1997), 36-40

Formation of the Epidermal Calcium Gradient Coincides with Key Milestones of Barrier Ontogenesis in the Rodent

Elias, P.M., Nau, P., Hanley, K., Cullander, C., Cumrine, D., Bench, G., Sideras-Haddad, E.,
Mauro, T., Williams, M.L. and Feingold, K.R.
Journal of Investigative Dermatology, **110**, (1998), 399-404.

Protein and DNA Contents in Sperm from an Infertile Human Male Possessing Protamine Defects that Vary over Time.

Bench, G., Corzett, M.H. de Yebra, L. Oliva, R. and Balhorn, R.
Molecular Reproduction and Development, **50**, (1998), 345-353.

Quantitative Imaging Microscopy for the Sensitive Detection of Administered Metal Containing Drugs in single cells and tissue slices-A demonstration using Platinum based chemotherapeutic Agents.

Mauthe, R.J., Sideras-Haddad, E., Turteltaub, K.W. and Bench, G.
Journal of Pharmaceutical and Biomedical Analysis, **17**, (1998), 651-663.

Acute Barrier Perturbation Abolishes the Ca^{2+} and K^+ gradients in Murine Epidermis-Quantitative measurement Using PIXE.

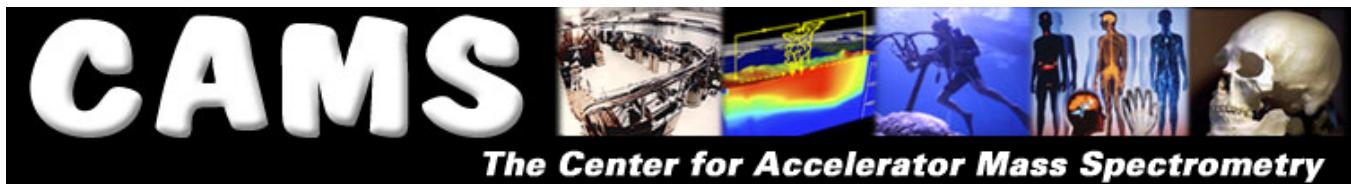
Mauro, T., Bench, G., Sideras-Haddad, E., Feingold, K.R., Elias, P.M. and Cullander, C.
Journal of Investigative Dermatology, **111**, (1998), 1198-1201.

Cadmium Concentrations in the testes, sperm and spermatids of mice subjected to long term Cadmium Chloride exposure.

Bench, G., Corzett, M.H., Martinelli, R. and Balhorn, R.
Cytometry, **35**, (1999), 30-36.

Analysis of Lichen Thin sections by PIXE and STIM using a Proton Microprobe.

Clark, B.M., Mangelson, N.F., St. Clair, L.L., Gardner, J.S., Cooper, L.S., Rees, L.B.,
Grant, P.G., and Bench, G.S.
Nuclear Instruments and Methods, **B150**, (1999), 248-253



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Quantitative Particle Induced X-Ray Emission Imaging of Rat Olfactory Epithelium Applied to the permeability of Rat Epithelium to Inhaled Aluminum

Divine, K. Grant, P. G. Lewis, J., and Bench, G.

Chemical Research In Toxicology, **12**, (1999), 575-581.

The Stand-Alone Microprobe at Livermore

Roberts, M.L. Grant, P.G., Bench, G., Brown, T.A., Frantz, B.R., Morse, D.H. and Antolak, A.J.

Nuclear Instruments and Methods, **B158**, (1999), 24-30.

A Flexible Labview based data acquisition and analysis system for scanning microscopy

Morse, D.H., Antolak, A.J., Bench, G. S. and Roberts, M.L.

Nuclear Instruments and Methods, **B158**, (1999), 146-152.

Mutations in ATP2C1, encoding a calcium pump, cause Hailey-Hailey disease.

Hu, Z., Bonifas, J.M., Beech, J., Bench, G., Shigihara, T., Ogawa, H., Ikeda, S.,

Mauro, T. and Epstein, H.E.

Nature Genetics, **24**, (2000), 61-65

A quantitative minimally invasive assay for the detection of metals in the stratum corneum.

Cullander, C., Jeske, S., Imbert, D., Grant, P. G. and Bench, G.

Journal of Pharmaceutical and Biomedical Analysis, **22**, (2000), 265-279.

Measurement of Age and Growth Rate in a Crustose Saxicolous Lichen *Caloplaca trachyphylla* using ¹⁴C Accelerator Mass Spectrometry

Clark, B. M., Mangelson N. F., St. Clair, L. L., Rees, L. B., Bench, G., and Southon, J.

Lichenologist, **32**, (2000), 399-403.

Zinc is sufficiently abundant within mammalian sperm nuclei to bind stoichiometrically with protamine 2

Bench, G., Corzett, M.H., Kramer, C.E., Grant, P.G., and Balhorn, R

Molecular Reproduction and Development, **56**, (2000), 512-519.

Olfactory bulb uptake and determination of biotransfer factors in the California ground squirrel (*Spermophilus beecheyi*) exposed to Manganese and Cadmium in environmental habitats

Bench, G., Carlsen T., Grant, P., Wollett J., Martinelli, R., Lewis, J. and Divine, K.K.

Environmental Science and Technology, **V35 (N2)**, (2001), 270-277.

Development of a low-metal adhesive tape to detect and localize metals in or on the stratum corneum at parts per million levels.

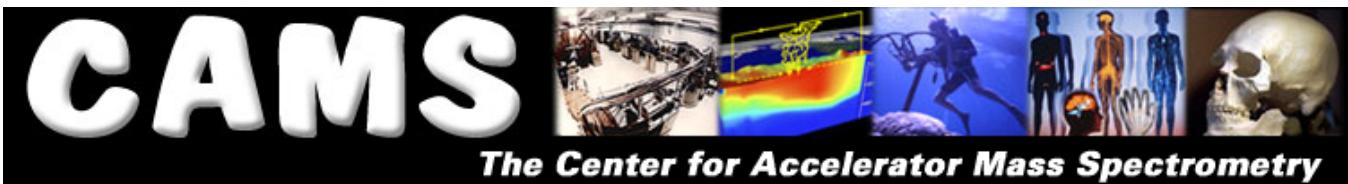
Cullander, C., Grant, P.G., Bench, G.

Skin Pharmacology and Applied Skin Physiology, **V14**, (2001), 46-51.

Characterization of mycobiont adaptations in the foliose lichen *Xanthoparmelia chlorochroa* (Parmeliaceae)

Clark, B. M., St. Clair, L. L., Mangelson, N. F., Rees, L. B., Grant, P.G. and Bench, G.

American Journal of Botany, **88**, (2001), 1742-1749.



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Accurate lifespan estimates cannot be obtained from radial ^{14}C profiles in the crustose lichen *Rhizocarpon geographicum* (L.) DC

Bench, G., Clark, B. M., Mangelson, N. F., St. Clair, L., Rees, L., Grant, P.G. and Sounthor, J. R.
Lichenologist, **33**, (2001), 539-542.

The use of STIM and PESA to respectively measure profiles of aerosol mass and hydrogen content across Mylar rotating drum impactor samples.

Bench, G., Grant, P.G., Ueda, D., Cliff, S.S., Perry K.D. and Cahill, T. A.
Aerosol Science and Technology, **36**, (2002), 642-651.

Use of $^{14}\text{C}/\text{C}$ ratios to provide insights into the magnitude of carbon turnover in the crustose saxicolous lichen *Caloplaca trachyphylla*.

Bench, G., Clark, B. M., Mangelson, N. F., St. Clair, L., Rees, L., Grant, P.G. and Sounthor, J. R.
Lichenologist, **34**, (2002), 169-180.

Comments on “Isotopic Analysis of Dinosaur Bones”

Goodwin, M.B., Bench, G. and Grant, P.G.
Analytical Chemistry **74**, (2002), 351A

A New Accelerator Mass Spectrometry system for ^{14}C quantification of biochemical samples.

Ognibene, T.J., Bench, G., Brown, T.A. Peaslee G.F. and Vogel, J.S.
International Journal of Mass Spectrometry **218**, (2002), 255-264

A High Throughput Method for the Conversion of CO_2 obtained from Biochemical Samples to Graphite in Septa-Sealed Vials for Quantitation of ^{14}C via Accelerator Mass Spectrometry

Ognibene, T.J., Bench, G., Vogel, J.S., Peaslee, G.F. and Murov, S.
Analytical Chemistry, **75**, (2003), 2192-2196.

Alpha particle energy loss measurement of microgram depositions of biomolecules.

Grant, P.G., Palmlad, M., Murov, S., Hillegonds, D.J., Ueda, D.L., Vogel, J.S. and Bench G.
Analytical Chemistry, **75**, (2003), 4519-4524.

Actin reorganization is abnormal and cellular ATP is decreased in Hailey-Hailey keratinocytes.

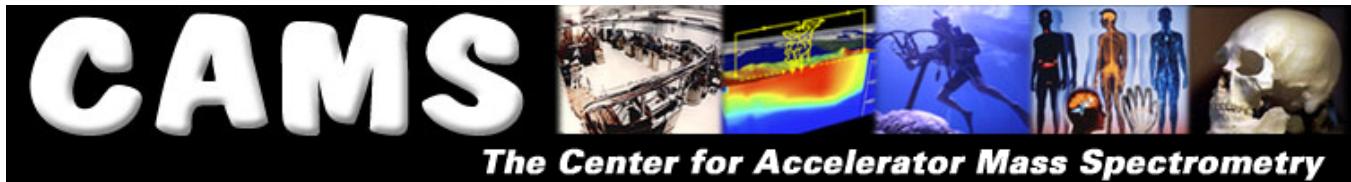
Aronchik, I., Behne, M.J., Leypoldt, L., Crumrine, D., Epstein, E., Ikeda, S., Mizoguchi, M., Bench, G.,
Pozzan, T. and Mauro, T.M.
Journal of Investigative Dermatology, **121**, (2003): 681-687.

Human keratinocyte ATP2C1 localizes to the Golgi and controls Golgi Ca^{2+} stores.

Behne, M.J., Aronchik, I., Epstein, E., Bench, G., Bikle, D.D., Pozzan, T. and Mauro, T.M.
Journal of Investigative Dermatology, **121**, (2003): 688-694.

Assessment of proton microbeam analysis of ^{11}B for quantitative microdistribution analysis of boronated neutron capture agent analogs in biomedical tissues.

Bench, G., Grant, P.G., Ueda, D.L., Autry-Conwell, S.A., Hou, Y. and Boggan, J.E.
Radiation Research, **60**, (2003), 667-676.



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Analysis of Aerosols from the World Trade Center Collapse Site, New York, October 2 to October 30, 2001

Cahill, T.A., Cliff, S.S., Perry, K.D., Jimenez-Cruz, M., Bench, G., Grant, P.G., Ueda, D.,
Shackelford, J.F., Dunlap, M., Meier, M., Kelly, P.B., Riddle, S., Selco, J. and Leifer, R.
Aerosol Science and Technology, **38**, (2004), 165-183.

Measurement of Contemporary and Fossil Carbon Contents of PM 2.5 Aerosols: Results from
Turtleback Dome, Yosemite National Park.

Bench, G.
Accepted for Publication In Environmental Science and Technology.

The LLNL accelerator mass spectrometry system for biochemical ^{14}C -measurements.

Ognibene, T. J., Bench, G., Brown, T.A. and Vogel, J.S.

Accepted for Publication in Nuclear Instruments and Methods B.

Trigeminal Uptake and Clearance of Inhaled Manganese Chloride in Rats and Mice

Lewis, J., Bench, G., Myers, O., Tinner, B., Staines, W., Barr, E., Divine, K.,
Barrington, W. and Karlsson, J.

Submitted to Neurotoxicology

Investigation of ion beam techniques for the *in-situ* analysis and exposure of particles encapsulated
by silica aerogel: applicability For Stardust

Graham, G.A., Grant, P.G., Chater, R.J., Westphal, A.J., Kearsley, A.T., Snead, C., Dominguez,
G., Butterworth, A.L., McPhail, D.S., Bench, G., and Bradley, J.P.

Submitted to Journal of Meteoritics and Planetary Science

Aerogel Keystones: Extraction of complete Hypervelocity Impact Events from Aerogel Collectors

Westphal, A.J., Snead, C., Butterworth, A.L., Graham, G.A., Bradley, J.P., Bajt, S.,
Grant, P.G., Bench, G., Brennan, S. and Piannetta, P.

Submitted to Journal of Meteoritics and Planetary Science