At a given area in a watershed, strontium isotope ratios are very stable and show little seasonal or temporal variation. Kennedy and his colleagues identified 11 different geologic signatures for 18 regions of the Connecticut River and its tributaries in central and southern Vermont, an area that has been the focus of Atlantic salmon restoration efforts for more than 30 years. Then they looked at the strontium isotope ratios in backbone tissue of juvenile salmon and in otoliths—bits of bony material near the brain known as "ear stones"—of adult salmon. The otoliths become a record of the fish's environment.

Kennedy said, "The chemical information is laid down in the otoliths on a daily basis, and they can be 'read' much like tree rings, but on an even finer scale."

Review Articles

The following review articles relevant to materials research have been published recently.

"Structure Shape and Stability of Nanometric-Sized Particles," by M. José Yacamán, J.A. Ascencio, H.B. Liu, and J. Gardea-Torresdey, *Journal of Vacuum Science and Technology B* **19** (4) (2001) p. 1091.

"Review of the Filtered Vacuum Arc Process and Materials Deposition," by P.J. Martin and A. Bendavid, *Thin Sold Films* **394** (1–2) (2001) p. 1.

"The Energy Balance at Substrate Surfaces during Plasma Processing," H. Kersten, H. Deutsch, H. Steffen, G. M. W. Kroesen, and R. Hippler, *Vacuum* **63** (3) (2001) p. 385.

Announcement of Element 118 Retracted

The team of Lawrence Berkeley National Laboratory scientists that announced two years ago the observation of what appeared to be element 118—the heaviest undiscovered transuranic element at the time—has retracted its original paper after several confirmation experiments failed to reproduce the results.

In a brief statement submitted to *Physical Review Letters*, the same publication in which the original results were announced, the research team stated, "In 1999, we reported the synthesis of element 118 in the (lead-krypton) reaction based upon the observation of three decay chains, each consisting of an implanted heavy atom and six sequential high-energy alpha decays, correlated in time and position. Prompted by the absence of similar decay chains in subsequent experiments, we (along with independent experts) re-analyzed the primary data files from our 1999 experiments. Based on these re-analyses, we conclude that the three reported chains are not in the 1999 data. We retract our published claim for the synthesis of element 118."

In addition to the confirmation tests at Berkeley, scientists at the GSI laboratory in Germany and the RIKEN laboratory in Japan were unable to duplicate the original reported results.

Micro-Organisms Process Gold Oxides into Metallic Gold

In research related to pollution clean-up, a team of University of Massachusetts microbiologists led by researcher Derek

https://doi.org/10.1557/mrs2001.221 Published online by Cambridge University Press