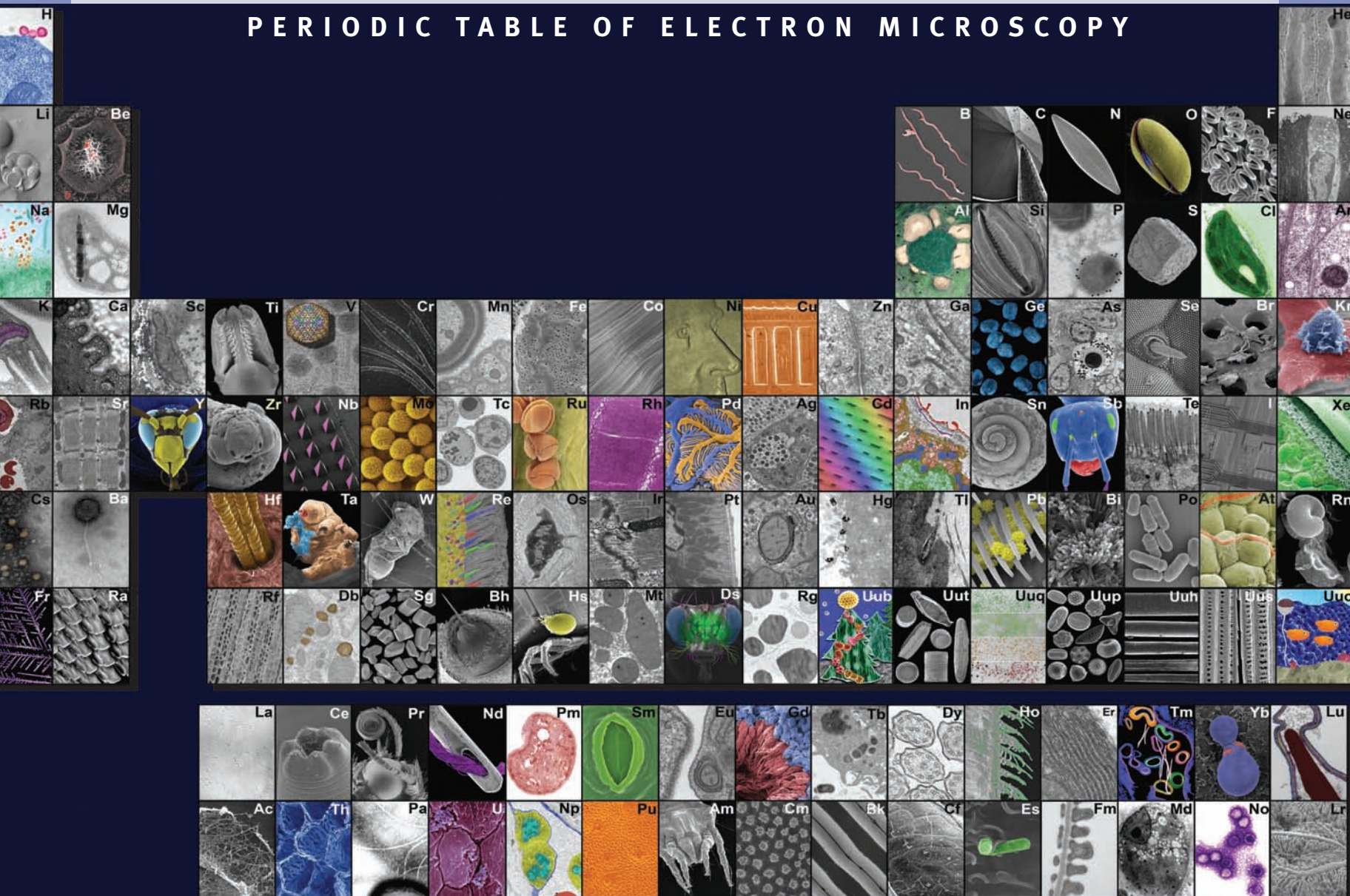


# PERIODIC TABLE OF ELECTRON MICROSCOPY



## WHAT WOULD MENDELEEV DO?

Donna Beer Stolz, research assistant professor of cell biology and physiology and assistant director of Pitt's Center for Biologic Imaging, somehow got it into her head last summer to take on an art project—more specifically, she decided to create the Periodic Table of Electron Microscopy. Her idea was to find something that would represent each elemental square and put it under the microscope.

“There are lots of periodic tables,” Jonathan Franks, artistic and scientific collaborator at the center, explains—like the Periodic Table of Mixology, a college student’s cocktail guide, or the Periodic Table of Fishing Lures and Flies, which Stolz remembers seeing on a T-shirt. “But they don’t try to match their periodic table to the elements.” Stolz didn’t realize the challenge the task would present. (What do you do for Rf, anyway, when you can’t acquire any single-celled rotifers? Up against the deadline for the display at this year’s science festival, Stolz ran to a fabric store, snatched a handful of raffia, then handed it off to Franks, saying, “Hurry up and take the photo!”) One hundred eighteen donated and gathered samples later, she had her creation.

Every square has a story. An undergrad working with Professor Graham Hatfull isolated a virus and named it. His image of “Awesome the Bacteriophage” replaced Ba (barium). Stolz’s favorite is an image of a tardigrade for Ta (tantalum). This clawed microscopic invertebrate, commonly referred to as a water bear, can enter a state of cryptobiosis and survive for years before being introduced back to life through rehydration.

You’ve probably been wondering about Bk (berkelium), to Stolz aka broken record. “That is actually the track ‘Black Country Woman’ from the Led Zeppelin record *Physical Graffiti*,” says Stolz. “You can see the grooves even though it was warped from spending the summer of ’78 in the back of an old boyfriend’s truck. Jonathan, who is a musician, had a terrible time breaking that record.” —Missy Raterman

THIS PERIODIC TABLE IS THE COMBINED WORK OF PAST AND PRESENT STAFF MEMBERS FROM THE ELECTRON MICROSCOPY UNIT OF THE CENTER FOR BIOLOGIC IMAGING FROM 1997 TO 2008: DONNA STOLZ, JONATHAN FRANKS, MARA SULLIVAN, ANDREW BARCHOWSKY, ELIZABETH IANNONE, MING SUN, DORIS CLAY, MARC RUBIN, ANA LOPEZ, FENGLI GUO, KATIE CLARK, FRAN SHAGAS, AND SIMON WATKINS. ADDITIONAL IMAGES AND SAMPLES WERE KINDLY PROVIDED BY DOZENS OF OTHER RESEARCHERS, BOTH AT PITT AND OTHER INSTITUTIONS.