Discovery of the Element with Atomic Number 112

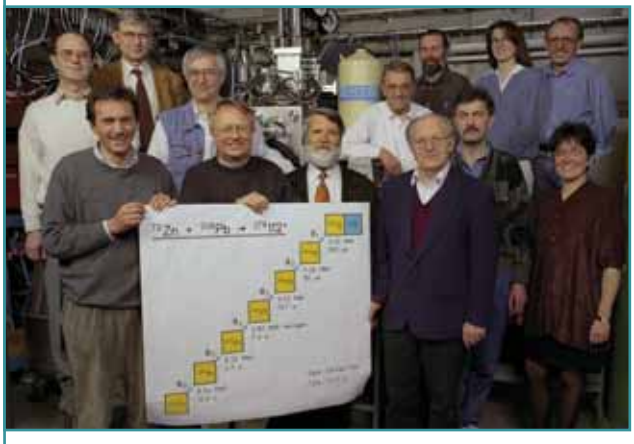
Priority for the discovery of the element with atomic number 112 has been assigned, in accordance with the agreed criteria, to Gesellschaft für Schwerionenforschung (GSI) (Center for Heavy Ion Research) in Darmstadt, Germany. The discovery evidence was recently reviewed and recognized by a IUPAC/IUPAP joint working party. IUPAC confirmed the recognition of the element in a letter to the head of the discovering team, Sigurd Hofmann.

The IUPAC/IUPAP Joint Working Party (JWP) on the priority of claims to the discovery of new elements has reviewed the relevant literature pertaining to several claims. In accordance with the criteria for the discovery of elements previously established by the 1992 IUPAC/IUPAP Transfermium Working Group, and reiterated by the 1999 and 2003 IUPAC/IUPAP JWPs, it was determined that the 1996 and 2002 claims by Hofmann et al. research collaborations for the discovery of the element with atomic number 112 at GSI share in the fulfillment of those criteria.

A synopsis of the relevant experiments and related efforts is presented in a technical report published online in *Pure and Applied Chemistry* on 25 May 2009. The new element is approximately 277 times heavier than hydrogen, making it the heaviest element in the periodic table.

With the priority for this discovery established, the laboratory at Darmstadt will be invited to propose a name for the super-heavy element. The suggested name will then go through a review process before adoption by the IUPAC Council.

doi:10.1351/PAC-REP-08-03-05 or see IUPAC project 2006-046-1-200



The international team of scientists presents the production of the element with atomic number 112 for the first time <www.gsi.de/portrait/Pressemeldungen/10062009-1_e.html>.

2009 Winners of the IUPAC Prizes for Young Chemists Announced

On 3 April 2009, IUPAC announced the winners of the 2009 IUPAC Prizes for Young Chemists, awarded for the best Ph.D. theses in the chemical sciences as described in 1 000-word essays. The five winners are:

- **Faisal A. Aldaye**, McGill University, Montréal, Canada
- **Christopher Bettinger**, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA
- **Xinliang Feng**, Max Planck Institute for Polymer Research, Mainz, Germany
- **Xing Yi Ling**, University of Twente, Enschede, Netherlands
- **Shengqian Ma**, Miami University, Oxford, Ohio, USA

The winners will each receive a cash prize of USD 1 000 and will be invited to travel and take part in the IUPAC Congress, 2–7 August 2009, in Glasgow, Scotland. Each prizewinner will also be invited to present a poster at the IUPAC Congress describing his or her award-winning work and to submit a short critical review on aspects of his or her research topics to be published in *Pure and Applied Chemistry*. The awards will be presented to the winners of the 2008 and 2009 prizes during the Opening Ceremony of the Congress.

The essays describing the 2009 winners' theses—which can be found on the IUPAC website—cover a wide range of subjects:

- **Aldaye**: "Supramolecular DNA Nanotechnology: Discrete Nanoparticle Organization, Three-Dimensional DNA Construction, and Molecule-Mediated DNA Self-Assembly"
- **Bettinger**: "Synthesis and Microfabrication of Elastomeric Biomaterials for Advanced Tissue Engineering Scaffolds"
- **Feng**: "C_3-Symmetric Discotic Liquid Crystalline Materials for Molecular Electronics: Versatile Synthesis and Self-Organization"
- **Ling**: "From Supramolecular Chemistry to Nanotechnology: Assembly of 3D Nanostructures"
- **Ma**: "Gas Adsorption Applications of Porous Metal-Organic Frameworks"

Thirty-six applications from 19 different countries were received. The Prize Selection Committee was