

## Concluding Remarks

*Dr. Seaborg*

This brings us to the end of the 25th Anniversary of mendeleevium. I think, in summary, that mendeleevium is a very interesting element. It is the first element that has been discovered and produced on a one atom at a time basis. The techniques worked out for mendeleevium have served, broadly speaking, as a model for the first synthesis and identification of elements beyond mendeleevium--the recoil technique, the one atom at a time chemistry, and so forth. It is probably the first element in the sequence going up that won't be possible to isolate in weighable amounts. That may be too strong a statement if I am talking about forever. I realize that fermium has not yet been isolated in weighable amounts, but the potential is clearly there because you can make fermium-257 by neutron irradiation, so I think it is just a matter of time until somebody does that. Mendeleevium-258 is sufficiently long-lived to isolate in weighable amounts, but you cannot make it by neutron irradiation and the yield by any other nuclear transmutation reaction is very small. I think the yields are too small for us to contemplate doing that now. I do not know how it might be a hundred or thousand years from now, but now it looks like it will not be possible to isolate mendeleevium in weighable amounts.

Mendeleevium is an interesting element from the standpoint of its chemistry. It is the first element, as you proceed up the actinide series, where the dipositive state plays an important role. It has a lot of interesting nuclear properties; perhaps it isn't distinguished so much from its neighbors in that aspect, however. It was the first element, the first of the tran-