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I rise in support of H. Res. 1069, congratulating Willard S. Boyle and George E. Smith for being awarded the 2009 Nobel Prize in physics. These two scientists invented the charge-coupled device, or CCD, while working at Bell Laboratories in Murray Hill, New Jersey. The development of the CCD was a breakthrough in electronic image sensing that led to today's digital cameras and other recording devices. CCDs are now integral components of modern laboratory instruments and medical sensors. The field of astronomy, in particular, benefitted from the invention of the CCD: the Hubble space telescope, the Kepler satellite, and other major astronomical instruments rely on CCDs for their spectacular images. Myself, I have used CCD detectors in physics research. I am deeply pleased that the Nobel Committee chose to reward these researchers' transformative contribution.

It is worth noting that Drs. Boyle and Smith set out to create a new tool for electronic memory, not a new imaging device. The dramatic success of their design is a reminder that research and development is a non-linear process. New products often spring from unexpected discoveries or develop from innovations that were originally intended for a different purpose. That is why our future economic success is inextricably linked to a robust, sustained federal investment in basic scientific research and a true commitment to a healthy national innovation infrastructure.

The creativity and inventiveness of Willard Boyle and George Smith were nurtured in the Bell Labs of the 1960s. That environment was responsible, in large part, for the seven Nobel Prizes that have been awarded for work carried out at Bell Labs over the years. The freedom to pursue science to unpredicted ends was a pillar of our research and development system for decades. Yet this opportunity is far too rare in today's public and private research institutions, and American competitiveness is not a given.

A recent study by the Information Technology and Innovation Foundation ranked the United States last among forty nations and regions in terms of national improvement in international competitiveness and innovation capacity over the last decade.

With that in mind, we should remember that a Nobel Prize is a lagging indicator of success. It can take decades for the importance of a scientific discovery to be fully understood. As we applaud Willard Boyle and George Smith, we should not forget that the work for which the Nobel Committee honored them in 2009 was completed 40 years earlier--in 1969. Perhaps the best tribute to their legacy--and the best way to ensure our collective success--is to make certain that the scientists and researchers working today in our universities and laboratories have the resources they need today to bring home the Nobel Prizes of 2050.