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What is AIST?
Open the door to science!

For the general public

The joy of science, introducing products and case studies that AIST has worked on

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Awards

2009/07/16

34th Inoue Harunari Award

Dr. Shinji Yuasa, Head of the Spintronics Research Group in the Electronics Research Institute, was awarded the 34th Inoue Harunari Prize by the Inoue Harunari Prize Committee (Japan Science and Technology Agency) on July 15, 2009.

The Inoue Harunari Award is awarded twice a year to universities, research institutes, etc. that have developed original research results and commercialized technologies (with a proven track record of sales). This year's award was given to "Magnesium oxide-based tunnel magnetoresistance element and its mass production technology," and was shared with Ichikawa Junji, chairman and president of Canon Anelva Corporation, which developed the technology for commercialization.

Dr. Yuasa developed a tunnel magnetoresistance element (MTJ element) using magnesium oxide (MgO) as the tunnel insulating layer, achieving revolutionary high performance more than twice that of conventional technology. Furthermore, he worked with Canon Anelva Corporation to develop mass production technology for MgO-MTJ elements, and made industrial application of MgO-MTJ elements possible with an original method of growing a crystalline layer on an amorphous layer. Hard disk drive (HDD) magnetic heads using MgO-MTJ elements have been commercialized since 2007, and are installed in almost all HDDs currently produced, contributing to the world's leading increase in HDD capacity.


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