

[A9] The Yamazaki-Teiichi Prize 2018, 山崎貞一賞

Development of high sensitivity InSb・InAs thin film Hall sensors and their applications

[The Yamazaki-Teiichi Prize | The 18th \(2018\) Yamazaki-Teiichi Prize Winner Semiconductor and Semiconductor Device](#)

The screenshot shows the official website of the Yamazaki-Teiichi Prize. The header includes the MST logo (Material Science and Technology Foundation of Japan) and navigation links for Home, Sitemap, Japanese, and English. A menu bar lists categories: Yamazaki Teiichi Prize, Application, Winners, Ceremony, and Contact and Application. Below this, a breadcrumb trail reads: HOME > Winners > The 18th (2018) Yamazaki-Teiichi Prize Winner Semiconductor & Semiconductor Device. The main heading is "The 18th (2018) Yamazaki-Teiichi Prize Winner Semiconductor & Semiconductor Device". A sub-heading reads "Development of high sensitivity InSb・InAs thin film Hall sensors and their applications". A table lists the winner: Ichiro Shibasaki.

Winner
Ichiro Shibasaki

The Yamazaki-Teiichi Prize 2018

Semiconductor and Semiconductor Devices

Development and application of high-sensitivity InSb and InAs thin film Hall devices

Recipient: Ichiro Shibasaki

Recipient: Ichiro Shibasaki (Asahi Kasei Corporation)

Presenter: The Foundation for Promotion of Material Science and Technology of Japan (MST Foundation)

Award Category: Semiconductor and Semiconductor Devices

Citation

Ichiro Shibasaki was awarded for his pioneering work in the development and commercialization of high-sensitivity thin-film Hall sensors using III-V compound semiconductors such as InSb and InAs. His innovations included:

- Fabrication of monocrystalline and polycrystalline thin films and quantum wells.
- Mass production of ultra-thin, high-sensitivity Hall elements.
- Practical applications in VCRs, PC cooling fans, HDDs, CD-ROMs, air conditioners, contactless current sensors, and automotive systems.

These sensors achieved 20–30 times higher magnetic sensitivity and significantly reduced

temperature dependence, leading to cumulative production exceeding 30 billion units.

Purpose of the Award

The Yamazaki-Teiichi Prize honors individuals who have made outstanding contributions to the advancement of science and technology in Japan, particularly in the fields of materials, semiconductors, and devices. It aims to promote innovation and recognize achievements that have had a significant impact on industry and society.

This award commemorates Dr. Teiichi Yamazaki's legacy and encourages pioneering research and development that leads to practical applications and industrial progress.

Value of the Award (English)

The Yamazaki-Teiichi Prize is one of Japan's most prestigious honors in applied science and engineering. It signifies national recognition of technological excellence and societal impact. The award enhances the visibility of the recipient's work and promotes further innovation in the field.

Winning this prize places the recipient among Japan's top innovators and validates the long-term industrial and academic significance of their contribution.

MST 山崎貞一賞 | 第 18 回（平成 30 年度）山崎貞一賞 半導体及び半導体装置分野

受賞は、長年にわたる研究成果とその実用化が社会に与えた影響の大きさを示すものです。