

IEEE ICCAS2023 Invited Paper on "Artificial Intelligent Partner System (AIPS) with Pinned Buried Photodiode used for Robot Vision and Solar Cell Panel "

- (1) Invited Paper [CCCAS2023_CS23-217_paper.pdf](#)
- (2) Slides [Slides.pdf](#) [Slides.pptx](#)
- (3) Slide Show [Slide_Show.html](#)
- (4) Presentation Video [Video_Presentation.mp4](#)

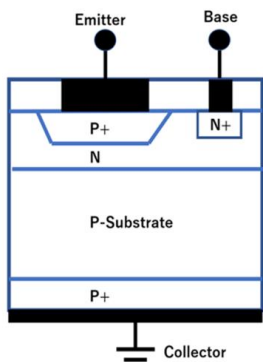
[PNP Double Junction Pinned Photodiode type Solar Cell Slide Show.html](#)

[Video Memo 2023 02 20 Slide Show](#)

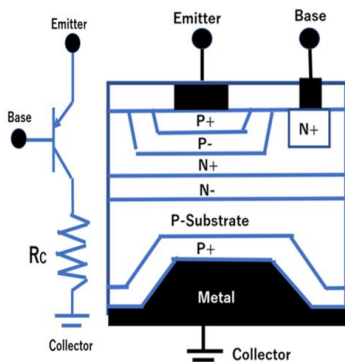
P+P-N-P-P+ double junction Pinned Photodiode type Solar Cell

[Japanese Patent Application JPA2020-131313](#)

Bell Lab 1948 Bipolar Transistor

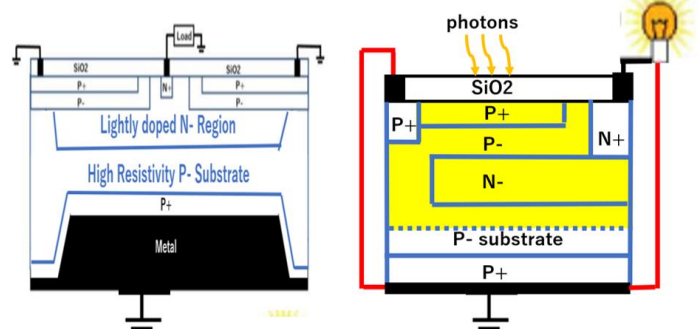


Sony Bipolar Transistor



PNP Double Junction Solar Cell,

also working as a single photo-electron detector



["Chronology of Silicon-based Image Sensor development"- Y. D. Hagiwara.pdf](#)

https://eds.ieee.org/images/files/newsletters/Newsletter_Jan23.pdf

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- (1) [P2019_3DIC2019_Paper_on_3D_Pinned_Photodiode_6_pages.pdf](#)
- (2) [P2020_EDTM2020_PaperID_3C4_by_Hagiwara_4_pages.pdf](#)
- (3) [P2021_IJSSA2021_Paper_20210616_on_Electrostatic_and_Dynamic_Analysis_of_Pinned_Photodiodes.pdf](#)
- (4) [ICECET2021_Paper61.pdf](#)
- (5) [ICECET2021_Paper75.pdf](#)

an invited ESSCIRC2001 Plenary Talk, Villach, Austria, September, 2001.

["Micro-Electronics for Home Entertainment"](#)

an invited ESSCIRC2008 Plenary Talk, Edinburgh, Scotland, UK, September, 2008.

["SOI Design in Cell Processor and Beyond"](#)

[Caltech_1975_PhD_Thesis_by_Yoshiaki_Daimon_Hagihara.pdf](#)