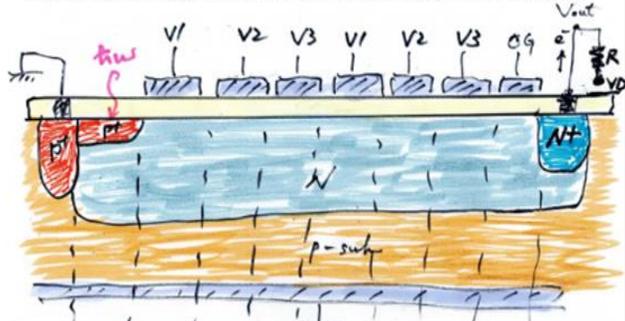
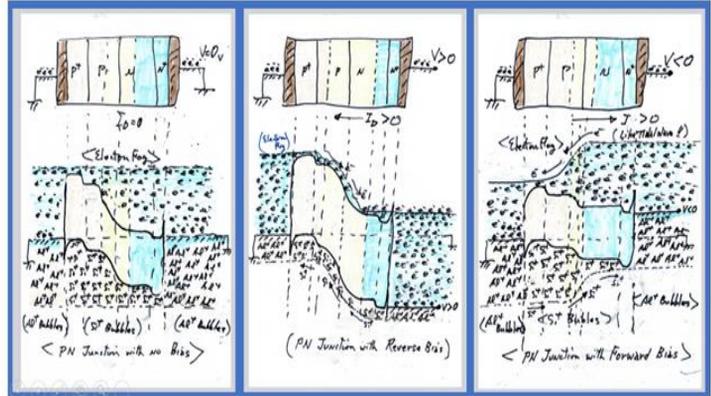


世界発のPinned Photodiodeの原理試作の結果を1978年に報告した。

Proceeding of the 10th Conference on Solid State Devices, Tokyo, 1978:  
Japanese Journal of Applied Physics, Volume 18 (1979) Supplement 18-1, pp.335-340



Frame Transfer (FT) 型のCCD Image Sensorでは  
All-Buried-Channel-MOS Gate方式を採用した。



Proceeding of the 10th Conference on Solid State Devices, Tokyo, 1978:  
Japanese Journal of Applied Physics, Volume 18 (1979) Supplement 18-1, pp.335-340

See JPA2020-131313 (JP6818208)

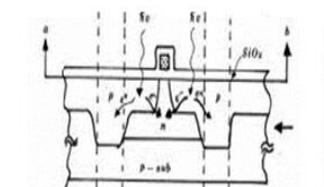


Fig.3 Cross sectional view of the Narrow Channel Transfer Electrode with the SiO2 exposed Pinned Window and the Pinned Photodiode P+ surface.

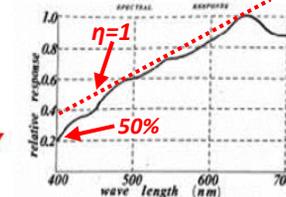
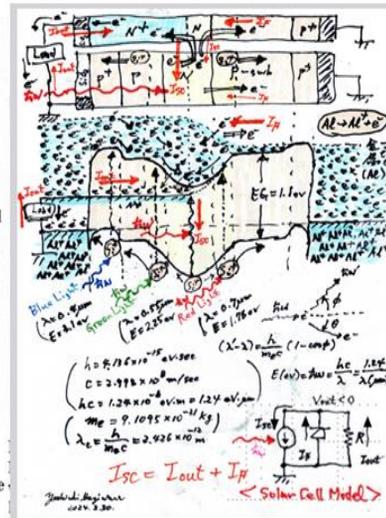
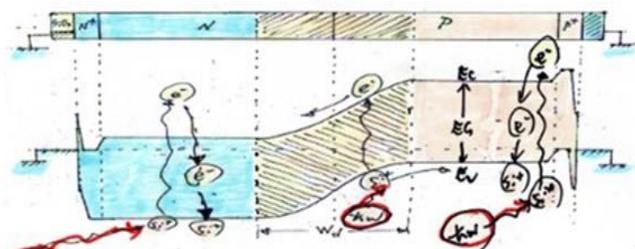


Fig.13 Spectral Response of the Pinned Photodiode with Pinned SiO2 Window and Pinned Surface.

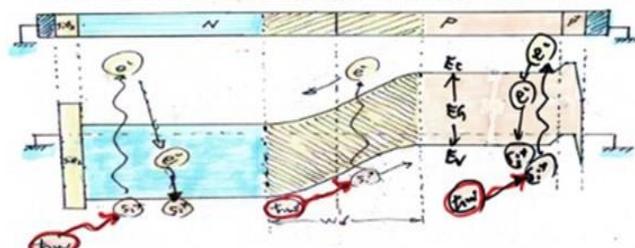


既に1978年、萩原は短波長光の分光感度特性が良好(50%以上)であることをSSDM1978で報告している。

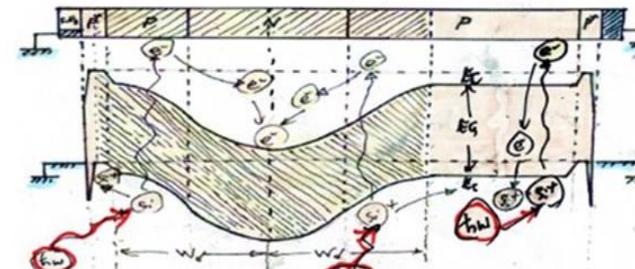
Conventional N+NP Single junction with No Bias



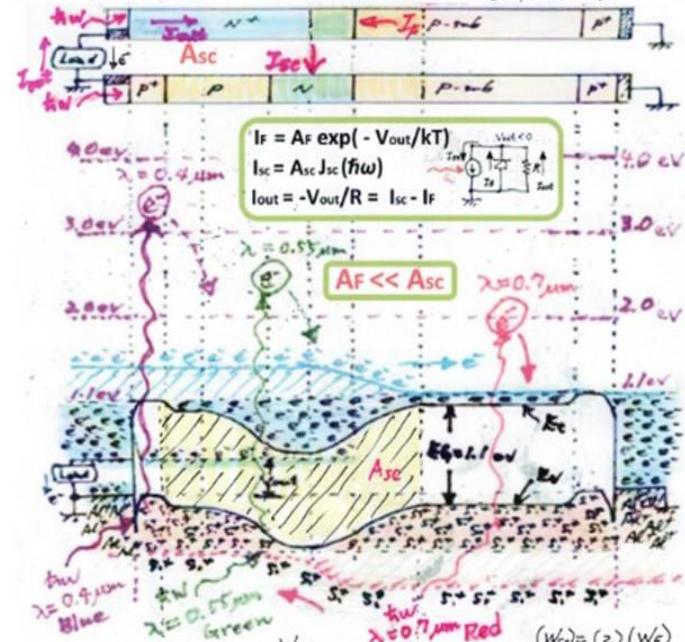
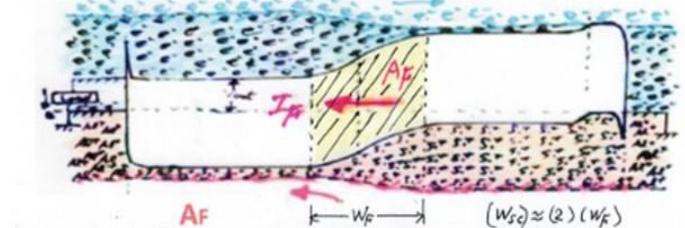
Floating-Surface NP Single junction type Solar Cell



P+PNPP+ Double junction Pinned Photodiode type Solar Cell  
See JPA2020-131313 (JP6828108)



Conventional N+P Single Junction Diode with Forward Bias



Pinned Photodiode type Solar Cell defined in JPA2020-131313  
filed on August 1, 2020 by Yoshiaki Hagiwara

有効な光電変換領域が従来型(Wd)の2倍以上を有する事からも、優れた光電量子変換効率が期待される。