# Ryo Hirose

List of Publications by Year
in descending order



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|---|---|---|---|
| 24 papers | 264 citations | 1040056 9 h-index | 940533 16 g-index |
| 26 all docs | 26 docs citations | 26 times ranked | 36 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | In Situ Transmission Electron Microscopy Study of Shrinkage Kinetics of CH<sub>4</sub>N-Molecular-Ion-Implantation-Induced Extended Defects. Journal of the Electrochemical Society, 2022, 169, 047521. | 2.9 | 1 |
| 2 | Reduction of White Spot Defects in CMOS Image Sensors Using CH<sub>2</sub>P-Molecular-Ion-Implanted Epitaxial Silicon Wafers. , 2022, , . | | 0 |
| 3 | Dissociation Kinetics of Trapped Hydrogen in High-dose Hydrocarbon-Molecular-Ion-Implanted Silicon during Rapid Thermal Annealing. E-Journal of Surface Science and Nanotechnology, 2022, , . | 0.4 | 0 |
| 4 | Proximity gettering design of silicon wafers using silicon hydride and hydrocarbon mixture molecular ion implantation technique. Materials Science in Semiconductor Processing, 2021, 135, 106063. | 4.0 | 3 |
| 5 | Reduction of Dark Current in CMOS Image Sensor Pixels Using Hydrocarbon-Molecular-Ion-Implanted Double Epitaxial Si Wafers. Sensors, 2020, 20, 6620. | 3.8 | 9 |
| 6 | Influence of oxygen on copper gettering in hydrocarbon molecular ion implanted region using atom probe tomography. Nuclear Instruments & Methods in Physics Research B, 2020, 478, 99-103. | 1.4 | 4 |
| 7 | Hydrogen passivation for reduction of SiO<sub>2</sub>/Si interface state density using hydrocarbon-molecular-ion-implanted silicon wafers. Japanese Journal of Applied Physics, 2020, 59, 125502. | 1.5 | 13 |
| 8 | Photoemission Spectroscopy Study on Hydrogen Termination Effect on SiO2/Si Structure Fabricated Using H+-Implanted Si Substrate. Journal of the Electrochemical Society, 2020, 167, 127505. | 2.9 | 1 |
| 9 | Effect of hydrocarbon molecular ion size for amorphous region formation analyzed by X-ray photoelectron spectroscopy. Japanese Journal of Applied Physics, 2020, 59, 025510. | 1.5 | 3 |
| 10 | Fundamental Characteristics of Cyanideâ€Related Multielement Molecular Ionâ€Implanted Epitaxial Si Wafers for Highâ€Performance CMOS Image Sensors. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900172. | 1.8 | 5 |
| 11 | Proximity Gettering Design of Hydrocarbonâ€“Molecularâ€“Ionâ€“Implanted Silicon Wafers Using Dark Current Spectroscopy for CMOS Image Sensors. Sensors, 2019, 19, 2073. | 3.8 | 20 |
| 12 | Effect of ramping up rate on end of range defect in multielement molecular-ion (CH<sub>3</sub>O)-implanted silicon wafers. Japanese Journal of Applied Physics, 2019, 58, 121002. | 1.5 | 1 |
| 13 | A Review of Proximity Gettering Technology for CMOS Image Sensors Using Hydrocarbon Molecular Ion Implantation. Sensors and Materials, 2019, 31, 1939. | 0.5 | 7 |
| 14 | Effect of dose and size on defect engineering in carbon cluster implanted silicon wafers. Japanese Journal of Applied Physics, 2018, 57, 011301. | 1.5 | 11 |
| 15 | Effect of low-oxygen-concentration layer on iron gettering capability of carbon-cluster ion-implanted Si wafer for CMOS image sensors. Japanese Journal of Applied Physics, 2018, 57, 021304. | 1.5 | 12 |
| 16 | Gettering mechanism in hydrocarbon-molecular-ion-implanted epitaxial silicon wafers revealed by three-dimensional atom imaging. Japanese Journal of Applied Physics, 2018, 57, 091302. | 1.5 | 7 |
| 17 | Room-temperature bonding of epitaxial layer to carbon-cluster ion-implanted silicon wafers for CMOS image sensors. Japanese Journal of Applied Physics, 2018, 57, 061302. | 1.5 | 8 |
| 18 | Gettering Sinks for Metallic Impurities Formed by Carbon-Cluster Ion Implantation in Epitaxial Silicon Wafers for CMOS Image Sensor. IEEE Journal of the Electron Devices Society, 2018, 6, 1200-1206. | 2.1 | 6 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Proximity gettering of silicon wafers using CH<sub>3</sub>O multielement molecular ion implantation technique. Japanese Journal of Applied Physics, 2018, 57, 096503. | 1.5 | 12 |
| 20 | (Invited) Proximity Gettering Design of Hydrocarbon Molecular Ion Implanted Silicon Wafers Using Direct Bonding Technique for Advanced CMOS Image Sensors: A Review. ECS Transactions, 2018, 86, 77-93. | 0.5 | 2 |
| 21 | Proximity gettering technology for advanced CMOS image sensors using carbon cluster ionâ€implantation technique: A review. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1700216. | 1.8 | 40 |
| 22 | Trapping and diffusion kinetic of hydrogen in carbon-cluster ion-implantation projected range in Czochralski silicon wafers. Japanese Journal of Applied Physics, 2017, 56, 025601. | 1.5 | 33 |
| 23 | Trapping and diffusion behaviour of hydrogen simulated with TCAD in projection range of carbonâ€cluster implanted silicon epitaxial wafers for CMOS image sensors. Physica Status Solidi C: Current Topics in Solid State Physics, 2017, 14, . | 0.8 | 19 |
| 24 | Proximity gettering of C<sub>3</sub>H<sub>5</sub> carbon cluster ion-implanted silicon wafers for CMOS image sensors: Gettering effects of transition metal, oxygen, and hydrogen impurities. Japanese Journal of Applied Physics, 2016, 55, 121301. | 1.5 | 42 |