

# Supriya Pillai

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4437937/publications.pdf>

Version: 2024-02-01

46  
papers

3,743  
citations

394286

19  
h-index

454834

30  
g-index

46  
all docs

46  
docs citations

46  
times ranked

4368  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Surface plasmon enhanced silicon solar cells. <i>Journal of Applied Physics</i> , 2007, 101, 093105.   | 1.1  | 1,624     |
| 2  | Harnessing plasmonics for solar cells. <i>Nature Photonics</i> , 2012, 6, 130-132.   | 15.6 | 435       |
| 3  | Plasmonics for photovoltaic applications. <i>Solar Energy Materials and Solar Cells</i> , 2010, 94, 1481-1486.   | 3.0  | 426       |
| 4  | Enhanced emission from Si-based light-emitting diodes using surface plasmons. <i>Applied Physics Letters</i> , 2006, 88, 161102.   | 1.5  | 242       |
| 5  | Effective light trapping in polycrystalline silicon thin-film solar cells by means of rear localized surface plasmons. <i>Applied Physics Letters</i> , 2010, 96, .                  | 1.5  | 128       |
| 6  | The effect of dielectric spacer thickness on surface plasmon enhanced solar cells for front and rear side depositions. <i>Journal of Applied Physics</i> , 2011, 109, .              | 1.1  | 125       |
| 7  | Absorption enhancement due to scattering by dipoles into silicon waveguides. <i>Journal of Applied Physics</i> , 2006, 100, 044504.  | 1.1  | 87        |
| 8  | Realistic Silver Optical Constants for Plasmonics. <i>Scientific Reports</i> , 2016, 6, 30605.   | 1.6  | 83        |
| 9  | Nanoparticle-enhanced light trapping in thin-film silicon solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , 2011, 19, 917-926.                              | 4.4  | 80        |
| 10 | Plasmonics in Organic and Perovskite Solar Cells: Optical and Electrical Effects. <i>Advanced Optical Materials</i> , 2017, 5, 1600698.  | 3.6  | 76        |
| 11 | Surface plasmons for enhanced silicon light-emitting diodes and solar cells. <i>Journal of Luminescence</i> , 2006, 121, 315-318.  | 1.5  | 71        |
| 12 | Enhanced light trapping for high efficiency crystalline solar cells by the application of rear surface plasmons. <i>Solar Energy Materials and Solar Cells</i> , 2012, 101, 217-226. | 3.0  | 64        |
| 13 | Re-evaluation of literature values of silver optical constants. <i>Optics Express</i> , 2015, 23, 2133.  | 1.7  | 39        |
| 14 | A novel silver nanoparticle assisted texture as broadband antireflection coating for solar cell applications. <i>Solar Energy Materials and Solar Cells</i> , 2013, 109, 233-239.    | 3.0  | 37        |
| 15 | The Impact of parasitic loss on solar cells with plasmonic nano-textured rear reflectors. <i>Scientific Reports</i> , 2017, 7, 12826.  | 1.6  | 30        |
| 16 | Can plasmonic Al nanoparticles improve absorption in triple junction solar cells?. <i>Scientific Reports</i> , 2015, 5, 11852.   | 1.6  | 23        |
| 17 | Low-Temperature Solution Processed Random Silver Nanowire as a Promising Replacement for Indium Tin Oxide. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 34093-34100.     | 4.0  | 23        |
| 18 | Plasmonic degradation and the importance of over-coating metal nanoparticles for a plasmonic solar cell. <i>Solar Energy Materials and Solar Cells</i> , 2014, 122, 208-216.         | 3.0  | 21        |

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|----|--|-----|-----------|
| 19 | Characterization of 2-D reflection pattern from textured front surfaces of silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2013, 115, 42-51.  | 3.0 | 20        |
| 20 | Self-Assembled Nanostructured Rear Reflector Designs for Thin-Film Solar Cells. <i>ACS Photonics</i> , 2015, 2, 1108-1116.   | 3.2 | 15        |
| 21 | Enhanced Broadband Light Trapping in c-Si Solar Cells Using Nanosphere-Embedded Metallic Grating Structure. <i>IEEE Journal of Photovoltaics</i> , 2016, 6, 61-67.   | 1.5 | 15        |
| 22 | Interfacial engineering of hole transport layers with metal and dielectric nanoparticles for efficient perovskite solar cells. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 25016-25024.                 | 1.3 | 15        |
| 23 | Design of Anodic Aluminum Oxide Rear Surface Plasmonic Heterostructures for Light Trapping in Thin Silicon Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2014, 4, 1212-1219.                                 | 1.5 | 10        |
| 24 | Grain boundary effects on the optical constants and Drude relaxation times of silver films. <i>Journal of Applied Physics</i> , 2016, 120, .   | 1.1 | 10        |
| 25 | Surface plasmons for improving the performance of quantum dot structures for third generation solar cell applications. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2011, 8, 181-184.   | 0.8 | 9         |
| 26 | The effect of ageing on the scattering properties of silver nanoparticles for a plasmonic solar cell. <i>Journal of Applied Physics</i> , 2015, 118, 153102.   | 1.1 | 8         |
| 27 | Large-Area Nanosphere Gratings for Light Trapping and Reduced Surface Losses in Thin Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2019, 9, 1012-1019.   | 1.5 | 8         |
| 28 | Evidence of Low-Temperature Joints in Silver Nanowire Based Transparent Conducting Layers for Solar Cells. <i>ACS Applied Nano Materials</i> , 2020, 3, 3205-3213.   | 2.4 | 7         |
| 29 | Angular reflection study to reduce plasmonic losses in the dielectrically displaced back reflectors of silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2013, 117, 343-349.                    | 3.0 | 4         |
| 30 | Dark carrier dynamics and electrical characteristics of organic solar cells integrated with Ag-SiO <sub>2</sub> core-shell nanoparticles. <i>Synthetic Metals</i> , 2017, 223, 34-42.                              | 2.1 | 4         |
| 31 | Porous Silicon Omnidirectional Bragg Reflector for Si Solar Cells. , 2014, , .   |     | 2         |
| 32 | Enhancement of scattering and light-extraction by metal particles on silicon waveguides. , 2005, 6037, 57.   |     | 1         |
| 33 | Promising hybrid graphene-silver nanowire transparent conductive electrode. , 2016, , .  |     | 1         |
| 34 | Effects of dielectric overcoating on the absorption enhancement of SOI LEDs with metal island films. , 2005, , .   |     | 0         |
| 35 | Effect of Surface Plasmon Resonance on the Photoluminescence from Si Quantum Dot Structures for Third Generation Solar Cell Applications. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1391, 18. | 0.1 | 0         |
| 36 | The effect of rear surface passivation layer thickness on high efficiency solar cells with planar and scattering metal reflectors. , 2012, , .   |     | 0         |

| #  | ARTICLE   | IF | CITATIONS |
|----|---|----|-----------|
| 37 | Plasmonics for Photovoltaics. , 2012, , 641-656.  |    | 0         |
| 38 | Ageing effects on plasmonic properties for solar cell applications. , 2013, , .   |    | 0         |
| 39 | Re-interpretation of Silver Optical Constants for Plasmonic Applications. , 2014, , .   |    | 0         |
| 40 | Plasmonic rear reflectors for thin-film solar cells: design principles from electromagnetic modelling. , 2014, , .                            |    | 0         |
| 41 | Nanosphere lithography for improved absorption in thin crystalline silicon solar cells. , 2015, , .   |    | 0         |
| 42 | Nanostructured metallic rear reflectors for thin solar cells: balancing parasitic absorption in metal and large-angle scattering. , 2015, , . |    | 0         |
| 43 | Low temperature solution process for random high aspect ratio silver nanowire as promising transparent conductive layer. , 2017, , .          |    | 0         |
| 44 | Light Harvesting in Organic Solar cells. , 2018, , 292-308.   |    | 0         |
| 45 | Plasmonics for Photovoltaics. , 2021, , 627-627.  |    | 0         |
| 46 | Photovoltaic Plasmonics. , 2008, , .  |    | 0         |