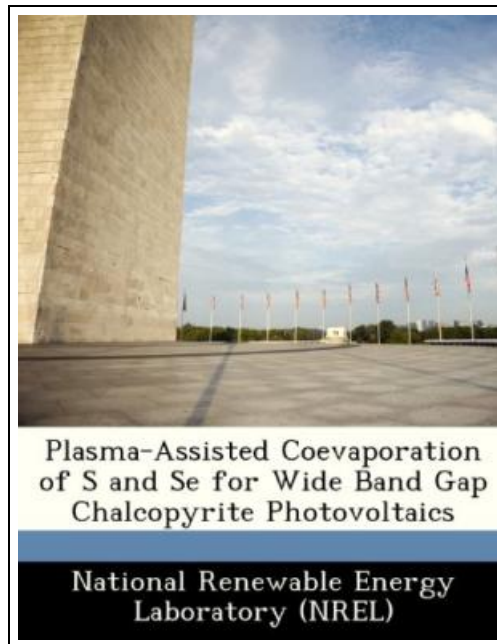


Plasma-Assisted Coevaporation of S and Se for Wide Band Gap Chalcopyrite Photovoltaics



Filesize: 2.38 MB

Reviews

*This created publication is excellent. It generally does not price a lot of. You may like just how the writer create this pdf.
(Jo Kuhlman)*

PLASMA-ASSISTED COEVAPORATION OF S AND SE FOR WIDE BAND GAP CHALCOPYRITE PHOTOVOLTAICS



BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 26 pages. Dimensions: 9.4in. x 7.5in. x 0.2in. In this work, ITN Energy Systems (ITN) and lower-tier subcontractor Colorado School of Mines (CSM) explore the replacement of the molecular chalcogen precursors during deposition (e. g. , Se₂ or H₂Se) with more reactive chalcogen monomers or radicals (e. g. , Se). Molecular species are converted to atomic species in a low-pressure inductively coupled plasma (ICP). Tasks of the proposed program center on development and validation of monatomic chalcogen chemistry, tuning of low-pressure monomer chalcogen sources, and evaluation of plasma-assisted co-evaporation (PACE) for CIGS co-evaporation. Likely advantages of deposition by plasma-enhanced co-evaporation include: (1) Providing potential for lower deposition temperature and/or for better film quality at higher deposition temperature. (2) Providing potential for decreased deposition times. (3) Providing high material utilization efficiency (90) that results in less deposition on other parts of the reactor, leading to lower clean up and maintenance costs, as well as longer equipment lifetime. High material utilization efficiency also reduces the total operating pressure, which is beneficial for the design and control of metal co-evaporation. Advantages include minimal metal-vapor beam spread and lower source operating temperatures. (4) Enabling deposition of wide-bandgap copper indium gallium disulfur-selenide (CIGSS) films with controlled stoichiometry. University researchers at CSM are developing and testing the fundamental chemistry and engineering principles. Industrial researchers at ITN are adapting PACE technology to CIGSS co-evaporation and validating PACE process for fabrication of thin-film photovoltaics. In₂Se₃ films, which are used as precursor layers in high-efficiency CIGS depositions, were used this year as the first test case for examining the advantages of PACE listed above. Gradually, the investigation is being extended to the complete high-efficiency three-stage co-evaporation process. This item ships from La Vergne, TN. Paperback.



[Read Plasma-Assisted Coevaporation of S and Se for Wide Band Gap Chalcopyrite Photovoltaics Online](#)

[Download PDF Plasma-Assisted Coevaporation of S and Se for Wide Band Gap Chalcopyrite Photovoltaics](#)

Other PDFs



Bully, the Bullied, and the Not-So Innocent Bystander: From Preschool to High School and Beyond: Breaking the Cycle of Violence and Creating More Deeply Caring Communities

HarperCollins Publishers Inc, United States, 2016. Paperback. Book Condition: New. Reprint. 203 x 135 mm. Language: English . Brand New Book. An international bestseller, Barbara Coloroso s groundbreaking and trusted guide on bullying-including cyberbullying-arms parents...

[Read Document »](#)



Children s Handwriting Book of Alphabets and Numbers: Over 4,000 Tracing Units for the Beginning Writer

Createspace, United States, 2015. Paperback. Book Condition: New. 254 x 203 mm. Language: English . Brand New Book ***** Print on Demand *****.The Children s Handwriting Book of Alphabets and Numbers provides extensive focus on...

[Read Document »](#)



Kindergarten Culture in the Family and Kindergarten; A Complete Sketch of Froebel s System of Early Education, Adapted to American Institutions. for the Use of Mothers and Teachers

Rarebooksclub.com, United States, 2012. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book ***** Print on Demand *****.This historic book may have numerous typos and missing text. Purchasers can download...

[Read Document »](#)



Children s and Young Adult Literature Database -- Access Card

Pearson Education (US), United States, 2012. Online resource. Book Condition: New. 175 x 124 mm. Language: English . Brand New Book. Pearson s Children s and Young Adult Literature Database This searchable database of over...

[Read Document »](#)



Preventing Childhood Eating Problems : A Practical, Positive Approach to Raising Kids Free of Food and Weight Conflicts

Book Condition: Brand New. Book Condition: Brand New.

[Read Document »](#)