

CURRICULUM VITAE

Dr. P. UDAY BHASKAR

Project Scientist (middle)



Date of Birth : 03 – 03 – 1979
Nationality : Indian
Marital Status : Married
Languages speak : Telugu, English, Hindi

Present Address : Centre for Solar Energy Materials (CSEM),
International Advanced Research Center for
Powder Metallurgy and New materials
(ARCI), Balapur (post), Hyderabad-500005,
INDIA
Phone: +91-40-24452532
E-mail: pudayb@project.arci.res.in

Fields of Interest : **Studies on Solar Energy Materials,
Fabrication of thin film solar cells,
Thin films and Semi- conductor devices.**

PROFESSIONAL EXPERIENCE

- **September 2013 – Onwards | Project scientist (middle), SERIUS Project
Center for Solar Energy Materials | ARCI, INDIA**
- **July 2012 - September 2013 | Post-Doctoral Fellow**
 - **Center for Solar Energy Materials | ARCI, INDIA**
- **February 2012 to June 2012 | Assistant professor of Physics,**
 - **Madanapalle Institute of Technology and Sciences, Madanapalle, A.P., INDIA**
- **November 2004 to October 2005 | Academic consultant**
 - **Department of Physics, Sri Venkateswara University, Tirupati, A.P.,INDIA**
- **October 2005 to September 2010 | Senior Research Fellow**
 - **Ministry of New & Renewable Energy, Govt. of India, New Delhi, INDIA**
- **June 2003 to September 2004 | Lecturer in Physics**
 - **NRK & KSR Gupta Degree College, Tenali, A.P., INDIA**

EDUCATIONAL QUALIFICATIONS

Ph. D in Physics	2011
Sri Venkateswara University, Tirupati	
M. Tech (Energy Management)	2003
Sri Venkateswara University, Tirupati	
M. Sc (Physics)	2001
Acharya Nagarjuna University, Guntur	

ACHEIVEMENTS

- ❖ Recipient of Senior Research Fellowship, MNRE, Govt. of India.
- ❖ Secured University 1st Rank in M. Tech (Energy Management)
- ❖ Stood class 2nd in M.Sc (Physics)

LIST OF PUBLICATIONS

No. of manuscripts published: 11, Citations > 780, h-index: 11

1. CdS Buffer layer by CBD on 300 mm X 300 mm glass for CIGS solar cell application
P. Uday Bhaskar and Sanjay R Dhage
Materials Today Proceedings 4 (2017) 12525-12528.
2. Growth and characterization of Cu₂ZnSnSe₄ thin films by a two-stage process
P. Uday Bhaskar, G. Suresh Babu, Y. B. Kishore Kumar and V. Sundara Raja
Solar Energy Materials and Solar Cells 115 (2013)181-188.
3. Growth and characterization of co-evaporated Cu₂ZnGeSe₄ thin films
P. Uday Bhaskar, G. Suresh Babu, Y.B. Kishore Kumar and V. Sundara Raja
Thin Solid Films 534 (2013) 249–254.
4. Preparation and characterization of tin sulphide thin films by chemical bath deposition
Y. Jayasree, U. Chalapathi, **P. Uday Bhaskar** and V. Sundara Raja
Applied Surface Science 258 (2012) 2732-2740.
5. Effect of bath concentration, temperature on the growth and properties of chemical Bath deposited ZnS films
P. Uday Bhaskar, G. Suresh Babu, Y.B. Kishore Kumar and V. Sundara Raja
Material Chemistry and Physics 134 (2012) 1106-1112.
6. Investigations on co-evaporated Cu₂SnSe₃ and Cu₂SnSe₃-ZnSe thin films
P. Uday Bhaskar, G. Suresh Babu, Y.B. Kishore Kumar and V. Sundara Raja
Applied Surface Science 257 (2011) 8529-8534.
7. Effect of Cu/ (Zn+Sn) ratio on the properties of co-evaporated Cu₂ZnSnSe₄ thin films
G. Suresh Babu, Y.B. Kishore Kumar, **P. Uday Bhaskar** and V. Sundara Raja
Solar Energy Materials and Solar Cells 94 (2010) 221-226.
8. Preparation and characterization of spray deposited Cu₂ZnSnS₄ thin films
Y.B. Kishore Kumar, G. Suresh Babu, **P. Uday Bhaskar** and V. Sundara Raja
Solar Energy Materials and Solar Cells, 93 (2009)1230–1237.
9. Effect of starting solution pH on the growth of Cu₂ZnSnS₄ thin films deposited by spray pyrolysis
Y.B. Kishore Kumar, G. Suresh Babu, **P. Uday Bhaskar** and V. Sundara Raja
Physica Status Solidi (a), 206 (2009) 1525-1530.
10. Effect of copper salt and thiourea concentrations on the formation of Cu₂ZnSnS₄ thin films by spray pyrolysis
Y.B. Kishore Kumar, **P. Uday Bhaskar**, G. Suresh Babu and V. Sundara Raja
Physica Status Solidi (a), 207 (2009) 149-156.
11. Effect of post - deposition annealing on the growth of Cu₂ZnSnSe₄ thin films for solar cell absorber layer
G. Suresh Babu, Y.B. Kishore Kumar, **P. Uday Bhaskar** and V. Sundara Raja
Semicond. Sci. and Technol. 23 (2008) 085023.
(Paper selected as top 5 of interest on the eve of 25th anniversary collection of SST)
12. Growth and characterization of co-evaporated Cu₂ZnSnSe₄ thin films for photovoltaic

applications

G. Suresh Babu, Y.B. Kishore Kumar, **P. Uday Bhaskar** and V. Sundara Raja
J. Phys. D: Appl. Physics **41** (2008) 205305.

List of papers presented in INTERNATIONAL CONFERENCES

1. CdS Buffer layer by CBD on 300 mm X 300 mm glass for CIGS solar cell application
P. Uday Bhaskar and Sanjay R Dhage
2nd International Conference on Solar Energy Photovoltaic (ICSEP-2016), Bhubaneswar, India, 17-19 Dec 2016.
2. Growth and characterization of sequentially deposited Cu₂ZnSnSe₄ thin films
P. Uday Bhaskar, G. Suresh Babu, Y. B. Kishore Kumar and V. Sundara Raja
18th International Photovoltaic Science and Engineering Conference and Exhibition (PVSEC), Kolkata, India, 19-23 Jan. 2009.
3. Effect of Cu/ (Zn+Sn) ratio on the properties of Cu₂ZnSnSe₄ thin films for application in photovoltaic applications
G. Suresh Babu, **P. Uday Bhaskar**, Y. B. Kishore Kumar and V. Sundara Raja
Presented at India –Singapore Symposium on Current trends in Physics - Organized by Dept. of Physics, IIT- Madras, Chennai 28 Feb. - 01 Mar. 2008.

List of papers presented in NATIONAL CONFERENCES

1. Growth and characterization of Co-evaporated Cu₂ZnGeSe₄ thin films
P. Uday Bhaskar, Y.B. Kishore Kumar, G. Suresh Babu and V. Sundara Raja
Oral presentation at National Conference on Materials for Energy Storage and Conversion (NCMES) – 2010, S.V. University, Tirupati, Jan. 23-24, 2010
2. Valance band studies of co-evaporated Cu₂ZnSnSe₄ thin films using ultraviolet photoelectron spectroscopy
G. Suresh Babu, Y.B. Kishore Kumar, **P. Uday Bhaskar**, D.M. Phase, T. Sripathi and V. Sundara Raja,
53rd DAE - Solid State Physics Symposium, BARC, Mumbai. Dec.16-20, 2008.
3. Preparation and characterization of spray deposited Cu₂ZnSnS₄ thin films
Y.B. Kishore Kumar, **P. Uday Bhaskar**, G. Suresh Babu and V. Sundara Raja
National Conference on Smart Materials and Recent Technologies (NCSMRT), S.V. University, Tirupati. Feb. 22-23, 2007.
4. Effect of post-deposition annealing on the properties of Cu₂ZnSnSe₄ thin films
G. Suresh Babu, Y.B. Kishore Kumar, **P. Uday Bhaskar** and V. Sundara Raja
National Conference on Smart Materials and Recent Technologies (NCSMRT), S.V. University, Tirupati. Feb. 22-23, 2007.
5. Studies on Chemical Bath Deposited ZnS thin films – Effect of concentration of constituents on the growth
P. Uday Bhaskar, G. Suresh Babu, Y.B. Kishore Kumar and V. Sundara Raja
National Conference on Smart Materials and Recent Technologies (NCSMRT), S.V. University, Tirupati. Feb. 22-23, 2007.
6. Effect of bath concentration and temperature on the properties of Chemical bath deposited ZnS films
G. Suresh Babu, **P. Uday Bhaskar** and V. Sundara Raja
National Conference on Novel Materials and Technologies (NCNMT) -2006, S.V. University, Tirupati. Feb. 17-18, 2006.
7. Growth of chemical bath deposited ZnS thin films with thioacetamide as a sulphur source
P. Uday Bhaskar, G. Suresh Babu and V. Sundara Raja

51st DAE - Solid State Physics Symposium, Barkatullah University, Bhopal, Dec.26-30, 2006.

8. Comparison of theoretical and practical performance of solar photovoltaic module

P. Uday Bhaskar, G. Suresh Babu and V.Sundara Raja

Oral presentation at National Conference on Emerging Trends in Energy and Environment (ETEE), Feb. 18-19, 2005.

Workshops Attended

- a) Attended the National Workshop on Thin Film Preparation and Characterization Techniques for Energy Conversion (TFPCT-2004) from November 22-26, 2004 at Alagappa University, Karaikudi.
- b) Attended the Seminar cum Workshop on Material Characterization and Surface Modification in Research and Industry (MCIA) organized by National Centre for Compositional Characterization of Materials, BARC, Hyderabad from 9-11th February 2005.
- c) Attended the Awareness workshop on “The facilities of UGC-DAE Consortium for Scientific Research” during March 4-5, 2006 at Dept. of Physics, Osmania University Hyderabad.
- d) Attended the “Inter University Accelerator Centre Acquaintance programme on Accelerator Based Research”, held on 01-12-2006 at Kongunadu Arts and Science College, Coimbatore.
- e) Attended Workshop-Cum-Review committee meeting on “National Renewable Energy Fellowship programme” organized by Centre for Energy Studies, IIT Delhi and Solar Energy Centre (MNRE), Gurgaon held during January 23-24, 2007.
- f) Attended National Workshop on “Solar Energy Materials and Devices” organized by School of Technology, KIIT University, Bhubaneswar during January 24-25, 2009.
- g) Attended workshop on “Frontiers of Excellence in Photovoltaic Science and Technology” organized by Indian Institute of Technology, Bombay during 15-17th January 2012.
- h) Attended workshop on Metallurgy for Non-Metallurgists (MNM-2016) organized by The Indian Institution of Metals, Hyderabad during 14-15 July 2016.

Strengths : Have good communication & interpersonal skills.
“NCC ‘C’ certificate with ‘B’ Grade holder

Social Activities : Blood Donation, Janmabhoomi Camps under N.C.C and Traffic Awareness Camp with Police Dept., Guntur.