

Yilei Shen
Drausnickstraße 39, Zi.211,
D-91052 Erlangen

June 23, 2016

Dätwyler Pharma Packaging Belgium NV
Nijverheidsstraat 5
3570 Alken

Dear Sir or Madam,

I am seeking a position where I can apply my experience as a coating engineer. As research associate (Ph.D. student) in the Institute Materials for Electronics and Energy Technology, I gained considerable experience in many areas of the thin film coating lab to fab research, especially formulation design of new functional coating materials as well as diverse industrial coating and drying technologies.

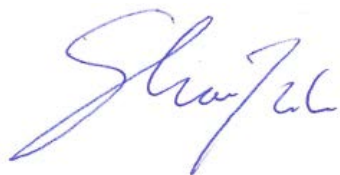
Specific areas of responsibility have included:

- Planning and execution of industrial projects (3 years)
- Develop and optimize spray and slot-die coating processes for thin film electronics application
- Modification of coating formulations for new coating technology
- Perform failure analysis on coatings with image analyzing program and trouble-shooting
- Evaluation and testing new technologies and aggregates for industrial drying applications
- Integration of new materials from lab phases into large-scale coating process

I am interested in an industry position in material design, coating process engineering, local/global customer supporting and consulting. I am also interested in a company which can offer me a global career possibility to practice my material and process engineering knowledges in the manufacture.

My enclosed resume further illustrates my professional competency in the technical coating field. Thank you for reviewing my credentials, and I look forward to hearing from you.

Sincerely,



Yilei Shen

Yilei Shen

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D-91052 Erlangen
Germany

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yileishen17@sina.com



OBJECTIVE: Coating Specialist – R&D Group Belgium Alken

STRENGTH: Material/Process Dualistic Thinking Project Management
Multicultural Background Solid Coating Knowledge
Analytical Capability Presentation Skills

SUMMARY: Material scientist and coating engineer
(3 years' experience in coating research institute + 2 years' industrial internship working on functional polymer materials)

EXPERIENCE

04/2013 – Present

Institute Materials for Electronics and Energy Technology
Research Associate
Printed Electronics, Erlangen, Germany

- Developed twin-fluid spray coating and measuring systems for large-area transparent conductive electrode
- Designed coating formulations (Nanoparticle, binder, surfactant, and other additives) for spray coating, slot-die coating and inkjet-printing processes)
- Solved the layer adhesion issues with new binder material systems

- - Optimized slot-die coating process of large-area multi-layer coating for organic light emitting diode application.
 - Investigated new low-temperature metallization process via ultra-fast conversion technologies. (Applications: Automotive OLED back lighting, Rear view mirror monitor, Antennas, Sensors)
 - Developed failure evaluation process via image analysis program
- 02/2011 – 04/2011 **Institute Materials for Electronics**
Student assistant
 Electrical devices, Erlangen, Germany
- Assisted in the research of solution-processed ITO layer via spin coating.
- 02/2008 – 11/2008 **Siemens AG - Corporate Technology**
Student trainee
 Functional Materials , Erlangen, Germany
- Assisted in the development of Acrylate- and Polyurethane based lacquer systems
 - Prepared and characterized the fiber reinforced composite material
 - Performed the rheological measurements
- 02/2007 – 10/2007 **Siemens AG - Corporate Technology**
Student trainee
 Functional Materials , Erlangen, Germany
- Assisted in the development of Epoxide- and Silicone based resins
 - Developed adhesive technology for permanent magnet applications
 - Performed the fatigue life-time tests for the reactive resin systems

EDUCATION

- 04/2013– 11/2016 Friedrich-Alexander-University Erlangen-Nuremberg
Doctor of Engineering -Material Science and
 Engineering
 Doctor Thesis: Slot die- and spray coating of semitransparent silver nanowire and opaque silver films over large areas for the thin-film electronics applications
- 10/2010– 03/2013 Friedrich-Alexander-University Erlangen-Nuremberg

	Master of Science - Material Science and Engineering Major: Polymer Materials Science; Organic Electronics; Material for Electronics and Energy Technology Master Thesis: Preparation and characterization of solution-processed CuInS ₂ absorber layer using a molecular-based precursor solution
04/2008– 09/2010	Friedrich-Alexander-University Erlangen-Nuremberg Bachelor of Science - Material Science and Engineering Major: Surface Science and Corrosion; Metal Material Science; Glass and Ceramic Materials; General Material Properties Bachelor Thesis: The effect of Chromium content of the high temperature oxidation behavior of Co-based superalloys
10/2005– 03/2008	Friedrich-Alexander-University Erlangen-Nuremberg Diplom of Engineering Chemical and Biological Engineering
01/2002– 05/2005	German High School Diploma (Abitur)
09/1998– 08/2001	Chinese High School Diploma

OVERSEAS EXPERIENCE

08/2006 – 10/2006	Pharma Engine Co., Ltd. <u>Trainee</u> Pharmaceutical Development, Shanghai, China
	<ul style="list-style-type: none"> - Assisted in the pharmaceutical development - Performed diverse chemical analytical measurements (NMR, HPLC, GC+MS)

PRESENTATIONS AND PUBLICATIONS

Presentations:

1. Y. Shen, (2016): „Advanced process and material investigations of large-area silver nanowire spray coatings for maximum quality“, LOPEC International Conference for Printed Electronics, 05-07.04.2016, Munich, Germany.
2. Y. Shen, (2015): „Industrial approaches to a highly reflective printable silver conductor for OLED applications“, Invited Talk, OSRAM OLED GmbH, 26.11.2015, Regensburg, Germany.
3. Y. Shen, (2015): „Spray coating of highly reproducible, conductive and uniform silver nanowire layer over large areas: an industrial perspective“, ECS European Coating Symposium, 09-11.09.2015, Eindhoven, The Netherlands.

4. F. Machui, Y. Shen, (2015): „Printed semitransparent OPV modules: materials, large-area processing and system integration“, LOPEC International Conference for Printed Electronics, 03-05.03.2015, Munich, Deutschland.
5. Y. Shen, (2013): „Preparation and characterization of solution-processed CnInS2 absorber layer using a molecular-based precursor solution for thin film CIS solar cell application“, EAM Cluster of Excellence Engineering of Advanced Materials, 18-20.03.2013, Kirchberg, Austria.

Publications

6. Y. Shen[†], M. Adler, B. Königer, J. Hornich, B. Schöneberger, M. Semel, M. Richter, J. Min, K. Forberich, K. E. Wirth, C. J. Brabec, (2016): „A route to highly uniform spray coated silver nanowire films over large areas: suspension atomization, coating pattern analysis, and optoelectrical characterization“, (submitted).
7. C. Quiroz[†], Y. Shen[†], N. Gasparini, C. J. Brabec, (2016): „Guidelines for efficient mono- and bifacially active semitransparent perovskite solar cells“, (submitted).
8. Y. Shen[†], H. Dakhil, B. Königer, K. Forberich, K. E. Wirth, A. Wierschem, C. J. Brabec, (2016): „Vertical spray scan: an alternative method of determining the breakup characteristics of airblast atomization of nanowire suspension“, (submitted).
9. L. Klein[†], Y. Shen, M. Killian, S. Virtanen, (2011): „Effect of B and Cr on the high temperature oxidation behavior of novel γ/γ' -strengthened Co-base superalloys“, Corrosion Science, Vol. 53, Issue 9, p. 2713-2720

LANGUAGES

Chinese (Native Language), German (Professionally Proficient), English (Professionally Proficient), Korean (Basic Knowledge), Dutch (Basic Knowledge)

COMPUTER KNOWLEDGE

Solid Edge - CAD (Experienced)
 ImageJ - Pattern recognition & Image analysis (Proficient)
 Eddraw - PFD (Proficient)
 Ansys - CFD (CFX: Basic Knowledge; ICEM: Basic Knowledge; Fluent: Basic Knowledge)
 Origin (Proficient)
 Microsoft Office (Excel: Proficient; Power Point: Proficient; Word: Proficient; Visio: Experienced; Outlook: Experienced)
 Matlab (Gute Kenntnisse)
 Mathematica (Experienced)
 Photoshop (Experienced)
 LabView (Basic Knowledge)

PERSONAL INFORMATION

Yilei Shen
born on August 17th, 1983 in Shanghai
Married (1 Child, *2015)
Relcoation and Travel (Global)

SOCIAL ACTIVITIES

Member of the excecutive board of „Verein Chinesischer Studenten und Wissenschaftler Erlangen“ 2009~2011, Member of „Technik ohne Grenzen e.V.“, Classic Music, Reading, Hiking, Cocking

Yilei Shen

Erlangen, June 22th, 2016

