

Ed Rutter



Senior Principal Process Engineer at Finisar
Semiconductors

<http://www.directoryinventor.com/profile/view/3gnB0Upe>

Experience

Senior Principal Process Engineer

Finisar

Semiconductors

May 2012 - Present

Technology Leader

Honeywell specialty Chemicals

10,001+ employees; Public Company; Chemicals

March 2007 - May 2012

Technology Leader: EUV Underlayers & Novel Hardmask Technology - Development of Si-containing BARCs for advanced lithography - Development of planarizing organic and inorganic thermosetting thin films for microelectronic and optical applications - Polymeric, low temperature curable materials for applications using flexible or plastic substrates Honeywell Electronic Materials 1349 Moffett Park Drive Sunnyvale, CA 94089

Senior Staff Process Engineer

Intel Corporation

10,001+ employees; Public Company; Semiconductors

May 2004 - September 2006

Defect reduction covering FEOL, mid-section and BEOL process for 90 nm and 65 nm flash processes. Main working focus was in the lithography and wet cleans functional areas, but worked with all groups including integration, yield, thin-films/diffusion, dry-etch, wet-etch, ash/DUV cure, litho, planar and implant.

Research & Product Development Manager/Principal Scientist

Shibley Company (Rohm & Haas Electronic Materials)

Chemicals

July 1996 - April 2004

Photoresist formulation covering i-line (365 nm) and DUV (248 nm) resists. Advanced conventional DNQ novolac resists as well as chemically amplified photoresists (positive and negative tone). Development of planarizing crosslinked organic underlayers for via protection as well as formulations to mitigate resist poisoning on CVD carbon doped oxides resulting in two patents Formulation of single wafer wet cleaning chemistry working with a key customer and OEM that displaced the incumbent and won business over a 6 month period of time. Member of the Emergency Response

Team

Project Chemist

Dow Electronic Materials

10,001+ employees; Public Company; Chemicals
June 1989 - July 1996

Development of photodefinable BCB materials. Project moved from conception to commercialization in five years resulting in two commercial formulations (5 m and 10 m). Involved in all aspects of project from formulation, to producing specialized formulated organic solvent developers and strippers to implementation of processes at customer sites. Member of the Emergency Response Team

Education

University of Wisconsin-Madison

Inorganic Chemistry; Minor: Organic Chemistry
1983 - 1989

Thesis: Synthesis, Characterization and Reactivity of Rhenium-Platinum Dihydrides Advisor: Professor Charles P. Casey

University of Delaware

Biological Sciences
1982 - 1983

University of Delaware

Chemistry
1978 - 1982

Activities and Societies: Undergraduate research in biochemistry (with Donald Wetlaufer) and inorganic chemistry (with John E. Bulkowski) Summer internship in Marine Chemistry with Charles H. Culberson

Concentrations: Biochemistry, Organic Chemistry; Inorganic Chemistry

William Penn High School

Academic
1974 - 1978

Patents (5)

Processable inorganic and organic polymer formulations, methods of production and uses thereof

Edward Rutter, Ahila Krishnamoorthy, Joseph Kennedy
March 3, 2011: 20110054119-A1

Stripping method (16 worldwide citation)

Edward W Rutter Jr, Cuong Manh Tran, Edward C Orr
April 12, 2005: 06878500

Polymer remover

Edward W Rutter
November 18, 2004: 20040229762-A1

Stripper

Edward W Rutter
November 4, 2004: 20040220066-A1

Aperture fill (13 worldwide citation)

Edward W Rutter Jr, Peter Trefonas III, Edward K Pavelchek
October 8, 2002: 06461717

[View all \(5\)](#)