

## FORTUNATO VILLAMAGNA, PH.D.

10805 Bernini Dr.  
Las Vegas, Nevada 89141

---

### PROFILE

Growth focused executive with extensive domestic and international experience leading science and engineering based companies. Key strengths include new technology development and stewardship, commercialization, product and process introduction, and rapid market development during all business cycles. Extensive experience creating focused and responsive teams.

### EDUCATION

BSc. Honors in Chemistry, Concordia University, Montreal, Quebec, 1982.

MSc. in Physical Chemistry, Concordia University, Montreal, Quebec, 1987.

Thesis: Fourier Transform Infrared Spectra of the V<sub>9</sub> Band of CD<sub>3</sub>-CD<sub>3</sub> and V<sub>12</sub> Band of CH<sub>3</sub>CD<sub>3</sub>

Ph.D. in Theoretical & Computational Chemistry, McGill University, Montreal, Quebec, 1991.

Thesis: Modeling Of Interfaces in Emulsion Explosives

MBA, Global Management, University of Phoenix, 2002.

### PROFESSIONAL EXPERIENCE

#### **President & CEO, Paragon Waste Solutions, LLC**

**12/2012 - Present**

Paragon Waste Solutions designs, fabricates, sells and operates systems for the destruction of Medical Waste followed by the application of a low energy plasma initiated oxidation process that makes possible the destruction of waste via a low temperature and low oxygen pyrolytic process.

#### **Chief Executive Officer, RF Biocidics Inc.**

**9/2010 – 12/2012**

RF Biocidics designs, manufactures and operates large scale Radio Frequency food commodity disinfestation and disinfection systems. This environmentally friendly, chemical-free alternative to chemical disinfection (pasteurization) and disinfestation of food and other products has broad range of potential applications, including food safety, and import/export compliance requirements.

#### **Chief Executive Officer, UTEC Inc., Oklahoma City, Ok**

**6/2006 - 2010**

CEO of this private label manufacturing and testing services company, serving the energetic materials, aerospace and automotive inflator businesses.

#### **President, BioEnergy Systems, LLC, Cleburne, Texas**

**6/2006 – 8/2007**

Initiated, spearheaded and operated a successful JV with Smithfield Foods commercializing technology platforms for the bio-fuels industry, including biodiesel, biogas systems, reformation, syngas to methanol conversion and landfill gas recovery.

**Vice President, Business Development, AMPAC, Las Vegas, Nevada 3/2002–6/2006**

Developed new business for this NASDAQ listed company with responsibility for specialty chemicals, fine chemicals and active pharmaceutical intermediates, energetic materials for aerospace and defense systems, explosives.

**Orica Australia Group / ORICA USA Inc., Watkins, Colorado 1998 - 2002**

**Vice President Technology, Americas & Europe - 2000 to 2002**

Reported to the CEO and managed the corporate technology center, support for site based plants, customer support and technical services in the Americas and Europe.

**Director, Bulk Delivered Products - 1998 - 2000**

Reported to the Vice President Bulk Systems and managed the bulk emulsion and capital equipment businesses in the U.S. and Canada.

**ICI U.K. Group / ICI Americas 1979 - 1998**

**Facility & Technical Manager, Energetic Solutions, Mansfield, TX - 1996 to 1998**

Reported to the Vice President of the newly formed Energetic Solutions subsidiary, responsible for the Mansfield business facility, field operations support, and capital equipment.

**Product Development Manager, Atlas Powder Co., Tamaqua, PA - 1991 to 1996**

Reported to the Vice President of Technology and lead the product development group for the explosives business.

**Senior Scientist, ICI Corporate Group, Beloeil, Quebec - 1986 to 1991**

Reported to the Product Development Manager, responsible for technology transfer, implementation and commercialization across the globe.

**Process Chemist, CIL, Inc., McMasterville, Quebec – 1979 to 1986**

Reported to the Engineering Manager, developing plants for the production of API's, industrial intermediates, acids and effluent treatment facilities.

Patents

Waste disposal

- 1) Application CA2903174A1 Fortunato Villamagna Fortunato Villamagna Priority 2013-03-01 • Filing 2014-02-28 • Publication 2014-09-04
- 2) US 9,550,148 Heavy metal removal
- 3) US 9,393,519 Waste disposal
- 4) US 8,870,735 Waste disposal

Emulsification method and apparatus

- 5) CA2018303C Fortunato Villamagna Fortunato Villamagna Priority 1989-06-16 • Filing 1990-06-05 • Grant 2001-02-06 • Publication 2001-02-06
- 6) Grant CA1325725C Fortunato Villamagna Orica Explosives Technology Pty Ltd. Priority 1987-12-17 • Filing 1988-12-05 • Grant 1994-01-04 • Publication 1994-01-04
- 7) Grant US4986858A Fortunato Villamagna Imperial Chemical Industries Plc Priority

1989-06-16 • Filing 1990-06-18 • Grant 1991-01-22 • Publication 1991-01-22

Explosive booster composition

- 8) CA1238786A Fortunato Villamagna Fortunato Villamagna Priority 1986-04-28 • Filing 1986-04-28 • Grant 1988-07-05 • Publication 1988-07-05
- 9) US 4,689,096 Explosive booster composition

Explosive compositions containing glycerin

- 10) WO2008091795A2 **Fortunato Villamagna** Bioenergy Systems Management, Llc

Emulsion explosive composition

- 11) CA1204595A Fortunato Villamagna Fortunato Villamagna Priority 1982-10-29 • Filing 1983-10-20 • Grant 1986-05-20 • Publication 1986-05-20
- 12) US 4,473,418 Emulsion explosive composition

Explosive comprising a foamed sensitizer

- 13) Grant CA2040346C Fortunato Villamagna Fortunato Villamagna Priority 1991-04-12 • Filing 1991-04-12 • Grant 2001-06-12 • Publication 2001-06-12

Low density explosives

- 14) CA2113945A1 Fortunato Villamagna Fortunato Villamagna Priority 1993-02-18 • Filing 1994-01-21 • Publication 1994-08-19

Compositions comprising demilitarized energetic materials (demex)

- 15) CA2107966A1 Fortunato Villamagna Fortunato Villamagna Priority 1992-10-15 • Filing 1993-10-07 • Publication 1994-06-25

Anfo explosives using an emulsified fuel phase

- 16) CA2260467A1 Fortunato Villamagna Fortunato Villamagna Priority 1999-01-28 • Filing 1999-01-28 • Publication 2000-07-28

Buffered emulsion blasting agent

- 17) CA2273666A1 Fortunato Villamagna Fortunato Villamagna Priority 1998-06-08 • Filing 1999-06-07 • Publication 1999-12-08

- 18) US 6,051,086 Buffered emulsion blasting agent

Inert stemming materials

- 19) Grant CA2144713A1 Fortunato Villamagna Orica Canada Inc. Priority 1994-04-11 • Filing 1995-03-15 • Publication 1995-10-12

- 20) Grant US5585593A Fortunato Villamagna Ici Explosives Usa Inc. Priority 1994-04-11 • Filing 1994-04-11 • Grant 1996-12-17 • Publication 1996-12-17

- 21) US 5454889

Inventors

Melvin A. McNicol, Quebec (CA) Fortunato Villamagna, Slatington PA

J. P. Michel Couture, Beloeil (CA) Filing Date

1993-08-19

Publication Date 1995-10-03

- 22) WO 2008/091795 A3R4

Inventors/Applicants

VILLAMAGNA, Fortunato, 10805 Bernini Drive Las Vegas, NV 89141 (US) HALL, Bradley, David, 12308 Rolling Ridge Drive Fort Worth, TX 76028 (US)  
Filing Date 2008-01-18  
Publication Date 2008-07-31

23) US 5456729

Inventors

Fortunato Villamagna, Slatington PA Arun K. Chattopadhyay, Brossard (CA) Ming C. Lee, St. Hubert (CA)

Filing Date 1992-04-09

Publication Date 1995-10-10

24) EP 0403091 B1

Inventors

Oliver, Raymond

Smith, Jeremy Guy Breakwell Villamagna, Fortunato

Filing Date 1990-05-23

Publication Date 1994-06-15

25) US 4986858

Inventors

Raymond Oliver, Cleveland (GB2) Jeremy G. B. Smith, Quebec (CA) Fortunato Villamagna, Quebec (CA)

Filing Date 1990-06-18

Publication Date 1991-01-22

26) AU 1999/033195 A1

Inventors

Fortunato Villamagna Anthony Francelj Scott Riley

Curt Link Filing Date 1999-06-07

Publication Date

1999-12-16

27) AU 756663 B2

Inventors

Fortunato Villamagna Anthony Francelj Scott Riley

Curt Link Filing Date 1999-06-07

Publication Date

1999-12-16

28) EP 0514000 B1

Inventors

Villamagna, Fortunato 6 Mountain View Drive Lee, Ming Chung

Chattopadhyay, Arun Kumar

Filing Date 1992-04-13

Publication Date 1998-01-28

29) EP 0107407 B1

Inventors

Bampffield, Howard Anthony Smith, Jeremy Guy Breakwell Villamagna, Fortunato

Filing Date 1983-09-30

Publication Date 1988-12-21

30) US 4689096

Inventors

**Fortunato Villamagna**, St. Leonard (CA) Howard A. Bampfield, Otterburn Park (CA)  
Filing Date 1987-03-09  
Publication Date 1987-08-25

31) AU 718409 B2  
Inventors

**Fortunato Villamagna** Melvin Adam McNicol Curtis Peter Link

32) US 4473418  
Inventors

Howard A. Bampfield, Otterburn Park (CA) Fortunato Villamagna, St Leonard (CA) Jeremy G.  
**B. Smith**, Edenvale (ZA)

Filing Date 1983-10-26  
Publication Date 1984-09-25

33) Prill coating

Grant US5454889A **Fortunato Villamagna Ici Canada Inc.**

Priority 1993-08-19 • Filing 1993-08-19 • Grant 1995-10-03 • Publication 1995-10-03

34) Sensitizer and use

Grant US5456729A **Fortunato Villamagna Ici Canada Inc.**

Priority 1992-04-09 • Filing 1992-04-09 • Grant 1995-10-10 • Publication 1995-10-10

35) Explosive emulsification method

Grant US4911770A **Fortunato Villamagna Imperial Chemical Industries Plc**

Priority 1987-12-17 • Filing 1988-12-15

---

### Peer Reviewed Publications

---

F. Villamagna, M.A. Whitehead, A.K. Chattopadhyay

A molecular Modeling Approach To The Analysis Of Present And Design Of Future Surfactants For Water-In-Oil Emulsions, Journal Of Molecular Structure (Theo Chem) 343 (1995) 77-103.

F. Villamagna, Cooper Langford

Analysis of Dilute Aqueous Sulfur Dioxide Solutions Using Thermal Blooming, Canadian Journal of Spectroscopy, April 1982.

F. Villamagna, M.A. Whitehead

Comparison of Complete conformational Searching And Energy-Optimized Tree branch Method in Molecular Mechanics Calculations, J. Chem. Soc. Faraday Trans. 1994, 90(1), 47-54.

F. Villamagna, M.A. Whitehead

Determination of the Ionic Strength and Degree of Crystallization in Nitrate Salt Based Emulsions Using <sup>14</sup>N NMR, Journal of Molecular Structure, 356, (1995), 149-158.

F. Villamagna, M.A. Whitehead, A.K. Chattopadhyay

Mobility of Surfactants at the Water-In-Oil Emulsion Interface, J. Dispersion Science and Technology, 16(2), 105-114, (1995).

L. Ghaicha, R.M. Leblanc, F. Villamagna, A.K. Chattopadhyay  
Monolayers of Mixed Surfactants at the Oil-Water Interface, Hydrophobic Interactions, and  
Stability of Water-In-Oil Emulsions, Langmuir, 1995, 11.

F. Villamagna, M.C. Lee, J.D. Aussel, C.K. Jen  
Nondestructive Characterization of Solids Levels in High Viscosity Emulsions, Fourth  
International Symposium on Nondestructive Characterization of Materials, June 11-14,  
1990.