

ATIF M. DABDOUB

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EDUCATION

1972 - 1976 Ph.D. in Physical Organic Chemistry, Georgia Institute of Technology

Dissertation research demonstrated that “naked” cyanide in conjunction with acetone cyanohydrin provided the most simple and stereoselective hydrocyanation reagent using α -Cholestenone as the substrate. **This Michael addition of “naked” Cyanide to α -Cholestenone was the first stereoselective application of the procedure.** The stereochemical results and the product yields were equal to or superior to other very complicated and dangerous hydrocyanating reagents.

The work also investigated the reaction of “naked” anions under solid-liquid as well as liquid-liquid phase-transfer catalytic conditions with **18-Crown-6 ether as the phase-transfer catalyst**. Many valuable conclusions were drawn from this work as were applicable to many areas of research in both pharmaceutical and industrial applications. **In addition, new procedures and new compounds listed in the dissertation were reported in the literature for the first time.**

1966 - 1970 B.S. in Chemistry, American University of Beirut

EXPERIENCE

2004 - Present

- President & Director of R&D for Unichem Technologies Inc., Atlanta, GA

- Co-founded Unichem Technologies Inc., in January 2004

2000 - 2003

- Did consulting work on Kidney Dialysis in Europe
- Did consulting work on Intellectual Property and other issues in the USA

1996 - 1999

- Mayo Chemical Company Inc., was acquired by Vulcan Materials Company, Inc. in June 1996. Served as VP in charge of Mayo Chemical Company, Inc.

1989 - 1996

- President, CEO and Chairman of the Board of Mayo Chemical Company Inc., Atlanta, GA. This also included Farm and Industrial Company in Dalton, GA, and Mayo Chemical Company in Chattanooga, TN.
- During my tenure, Mayo Chemical Company Inc. became the largest and premier producer of organic phosphorous compounds (organophosphates) of any single manufacturer worldwide.
- We also acquired fame throughout the world for our novel and innovative technologies in several fields.

1977 - 1989

- Vice-President in charge of Research & Development of Mayo Chemical Company, Inc., Atlanta, GA
- During my tenure, Mayo moved from a small, local company that did business only in Georgia, Alabama & Tennessee to a world class company whose products were shipped across all of North America and to the rest of the world.

MEMBERSHIPS

- Reviewer for the "Analyst", the publishing arm of the Association of Water Technologies, Inc., 1993-1996.
- Active Member (total of 9) of the Phosphonates Task Force (PTF) and the PTF's Toxicology Committee that was organized and directed by (SOCMA) in Washington, D.C., 1990-1995
- Member of the Advisory Board Committee of Georgia Tech's School of Chemistry and Biochemistry, 2009 to present.

PATENTS

- US Non-provisional Patent Application: Methods for Synthesizing Phosphonic Compounds and Compounds Thereof.
Patent No.: US 7,420,081 B2
Date of Patent: September 2, 2008
- US Non-provisional Patent Application: Methods for Synthesizing Phosphonic Compounds and Compounds Thereof.
Patent No.: US 7,442,831 B2
Date of Patent: October 28, 2008
- These (2) patents cover a new process for the manufacture of IPPA (Isopropenyl Phosphonic Acid Monomer) as well as PIPPA (Poly Isopropenyl Phosphonic Acid Polymer), which results when IPPA is homopolymerized. PIPPA is the finest and best corrosion inhibiting product in the world for use in high pressure/ high temperature utility boilers such as power plants, desalination plants, nuclear plants, etc. Today, this product is used by GE, Chemtreat, Ashland, Buckman, as well as others.
- US Non-provisional Patent Application: Phosphonic Compounds and Methods of Use Thereof.
Patent No.: US 8,076,432
Date of Patent: December 13, 2011
- US Non-provisional Patent Applications: Phosphonic Polymers Having a Phosphinate Backbone and Methods of Making and Using Thereof.
Patent No.: US 8,101,700
Date of Patent: January 24, 2012
- South Africa Patent Application No. 2008/10794, Issue date: March 31, 2010
- US Utility Patent Application: Compositions and Processes to Increase Pulp Yield, Reduce Extractives, and Reduce Scaling in a Chemical Pulping Process.
Patent No.: US 7,807,021 B2
Date of Patent: October 5, 2010
- US Utility Patent Application: Compositions and Processes to Increase Pulp Yield, Reduce Extractives, and Reduce Scaling in a Chemical Pulping Process.

Patent No.: US 8,980,602 B2

Date of patent: December 30, 2014

- These (2) patents cover state-of-the-art technologies that serve to control scale in Pulp digesters and evaporators. This innovative technology extends the useful life of the digesters up to one year and cut back on down time for evaporators.

Furthermore, these products have the ability to dissolve and remove scale once it has formed, a new finding, in addition to having the best scale removal efficiency of any product on the market. A very interesting finding is that our patented products do indeed increase the yield of pulp production by 5 to 7%. This has been totally unknown and unheard of until we came in the picture. Furthermore, when used in evaporators, they will keep the tubes > 95% clean and unclogged for a long time. We are also able to concentrate the black liquor to about 80% before it is taken to the furnace for fuel energy.

List of Patents for Atif Dabdoub.xlsx

A	B	C	D	E	F
Country	Status	Application Number	Application Date	Patent Number	Grant Date
Brazil	Filed	P10713564-5	6/19/2007		
Canada	Granted	2656015	6/19/2007	2656025	3/31/2015
Czech Republic	Granted	EP2035620	6/19/2007	CZ/ EP2035620T3	8/29/2012
European Patent Convention	Granted	07798738.6	6/19/2007	EP2035620	8/29/2012
Finland	Granted	07798738.6	6/19/2007	EP2035620	8/29/2012
Germany	Granted	EP2035620	6/19/2007	602007025149.4	8/29/2012

Portugal	Granted	07798738.6	6/19/2007	EP2035620	8/29/2012
South Africa	Granted	2008/10794	6/19/2007	2008/10794	3/31/2010
Spain	Granted	07798738.6	6/19/2007	EP2035620	8/29/2012
Sweden	Granted	07798738.6	6/19/2007	EP2035620	8/29/2012
United States	Granted	11/472498	6/21/2006	7807021	10/5/2010
United States	Granted	12/897380	10/4/2010	8980602	12/30/2014
United States	Granted	11/743947	5/3/2007	7420081	9/2/2008
United States	Granted	10/886406	7/7/2004	7442831	10/28/2008
United States	Granted	12/207945	9/10/2008	8076432	12/13/2011
United States	Granted	12/347025	12/31/2008	8101700	1/24/2012

SELECT PUBLICATIONS & INVITED SEMINARS

- Mayoquest Organophosphorus Compounds in Scouring and Bleaching of Textiles (1978)
- Kaolin Clays: "The Unprecedented Preparation of No. 1 and No. 2 Coating Clays at 70% Slip Solids with Excellent Rheological Properties (Both Low and High Shear) and Aging Stabilities". This was a pioneering work on Kaolin Clay processing (a dissertation that was 400 pages long). This novel and innovative

work changed the whole concept of Kaolin Clay mining and processing forever. It also saved and made the industry untold fortunes. (1980)

- Mayo's Formulated Stabilizers in Silicate-Free Hydrogen Peroxide Bleaching of Textiles (1981)
- "Chelates in Water Treatment", 3rd Annual Convention, Association of Water Technologies Inc., Orlando, FL, Nov. 29-Dec 1, 1990. This became a classic paper that was made part of Ph.D. program in several schools in the U.S. and outside.
- "Industrial Chelates: Chemistry and Applications/ Part One: Theory of Scale Formation and Prevention. (March, 1998)
- Performance of a new proprietary phosphonate as Calcium Carbonate inhibitor. (Oct. 2002)
- Performance of a new proprietary phosphonate: Part II. Stability to Sodium Hypochlorite. (March 2003)
- New and Innovative Chelants for Hydrogen Peroxide Bleaching of Pulp. (April 2004)
- "New Technologies in Polymer Chemistry", AWT 2008 Annual Convention and Exposition, Austin, Texas, November 5-8
- Methods for Synthesizing Phosphonic Compounds and Compounds Thereof (Dec. 2008).

Swedish Patent Application 1651259-2

**For: Dietary Macro/Micronutritional Supplement For Patients Undergoing
Kidney Dialysis.**

- Filed: September 23rd, 2016
- Granted: February 25th, 2020
- Official Publication Number: **542106**

Abstract: Provided herein is a nutritional supplement designed to support kidney and cardiac function as well as mitochondrial energy function needs for patients undergoing hemodialysis. This supplement replenishes essential vitamins and minerals that are lost during dialysis, does not contain compounds that may specifically cause harm to dialysis patients, and provides support for tissue undergoing oxidative stress.