



John Hines, PhD

Technical Director, Industrial Minerals at SNF Flomin

Atlanta, Georgia (Greater Atlanta Area) | Mining & Metals

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John Hines, PhD's Overview

Current	Technical Director, Industrial Minerals at SNF Flomin
Past	Senior Research Scientist at Georgia-Pacific Chemicals, LLC R&D Program Manager at Georgia-Pacific Chemicals, LLC Business Manager for Industrial Resins at Georgia Pacific Resins, Inc. see all
Education	University of Georgia Eckerd College
Connections	264 connections

John Hines, PhD's Summary

Specialties: New product and new market development, intellectual property management, business management, R&D management, thermosetting resin chemistry, mining chemicals, oilfield chemicals, high performance carbon, fertilizer chemistry, die, pigment, & colorant chemistry

John Hines, PhD's Experience

Technical Director, Industrial Minerals

SNF Flomin

Privately Held; 501-1000 employees; Chemicals industry
July 2013 – Present (7 months)

R&D, technical support, and business development for mining flotation chemicals

Senior Research Scientist

Georgia-Pacific Chemicals, LLC

Privately Held; 10,001+ employees; Paper & Forest Products industry
September 2012 – July 2013 (11 months) | 2883 Miller Road, Decatur, GA 30035

Product, technology, & business development for the mining, oilfield, high performance carbon, adhesive, & binder markets

R&D Program Manager

Georgia-Pacific Chemicals, LLC

Privately Held; 10,001+ employees; Paper & Forest Products industry
February 2006 – October 2012 (6 years 9 months) | 2883 Miller Road, Decatur, Georgia

- > R&D and Business Development directed at new markets and new products
- > Currently focused on developing our mining chemical business including the Talon® Brand Flotation Reagents.
- > Co-authored 19 patents & published patent applications & 12 technical papers on new products for the mining, oilfield, freeze conditioning & dust control markets
- > Helped to commercialize patent-pending products in potash, phosphate, coal & iron flotation.
- > Co-authored 1 published patent application on a process for making a high performance carbon suitable for use in a battery or ultracapacitor.

Business Manager for Industrial Resins

Georgia Pacific Resins, Inc.

Privately Held; 10,001+ employees; Paper & Forest Products industry
March 2003 – February 2006 (3 years) | Atlanta, Georgia

- > Managed the Industrial Thermosetting Resins Business which supplies resins, binders and adhesives into the following markets: Laminates, Roofing, Insulation, Aerospace Composites, Coatings, Mining, Oilfields, Foundries, Friction Materials & Abrasives, among others.
- > Management responsibilities included Sales, Marketing, R&D.

R&D Manager for Industrial Resins

Georgia Pacific Resins, Inc.

Privately Held; 10,001+ employees; Paper & Forest Products industry
January 1994 – February 2003 (9 years 2 months) | 2883 Miller Road, Decatur, Georgia

- > Managed R&D for the Industrial Resins Business
- > Developed Intellectual property including co-authoring 4 issued patents, 3 published patent application, & 2 technical papers on novel binders and

adhesives including formaldehyde-free thermosetting resins
> Managed R&D groups in Tacoma, WA and Decatur, GA from '94 to '97

R&D Group Leader

Georgia-Pacific Resins, Inc.

Privately Held; 10,001+ employees; Paper & Forest Products industry
December 1991 – December 1993 (2 years 1 month) | 2883 Miller Road, Decatur, Georgia

> managed an R&D group that developed thermosetting resins for the laminate, filtration, insulation, glass mat & FRP composites markets.

Development Chemist

Milliken and Company

Privately Held; 5001-10,000 employees; Textiles industry
October 1985 – December 1991 (6 years 3 months) | Spartanburg, South Carolina

- > Led R&D team that developed The Versatint Supra® line of polymeric colorants used in the textile industry
- > Co-inventor of 4 patents protecting Versatint Supra® polymeric colorants
- > Co-developed The Liquitint® polymeric colorants currently being sold primarily into the soap and detergent industry.
- > Co-inventor on 2 patents protecting Liquitint® polymeric colorants .
- > Co-inventor on a patent for washable inks for the washable marker industry
- > Co-inventor on 2 patents protecting novel UV stabilizers for coatings, plastics, and fibers
- > Recognized on the Milliken and Co. Inventors Hall of Fame in 1991

Graduate Research Assistant

The University of Georgia

Privately Held; 10,001+ employees; Paper & Forest Products industry
January 1981 – August 1985 (4 years 8 months) | Athens, Georgia

- > Worked as a graduate research assistant for Professor John Garst while attending graduate school in the chemistry department at the University of Georgia.
- > The focus of the work was elucidating organic chemical reaction mechanisms.
- > Co-authored 4 technical papers supporting this research.

Graduate Teaching Assistant

The University of Georgia

Privately Held; 10,001+ employees; Paper & Forest Products industry
September 1979 – December 1980 (1 year 4 months) | Athens, Georgia

- > Teaching first and second year undergraduate laboratory chemistry courses,
- > Grading chemistry exams, and generally helping out in the Chemistry Department.

Student Aide

Argonne National Laboratory

Government Agency; 1001-5000 employees; Research industry
January 1978 – December 1978 (1 year) | Argonne, Illinois

- > Worked with a team developing a support technology for a fusion reactor. We were developing a liquid lithium loop which would act as the heat exchanger, reactor coolant, and tritium fuel breeder on a fusion reactor.
- > Performed maintenance on the three-story, pilot liquid lithium loop.
- > Constructed a laboratory-scale lithium loop using vanadium metal inner sheath.
- > Co-authored two technical presentations supporting this project.

John Hines, PhD's Skills & Expertise

Business Management	Organic Chemistry	R&D Management	R&D	Chemistry	Coatings	Management	Resin
Analytical Chemistry	Materials	Polymer Chemistry	Product Development	Coaching Staff	Plastics	Intellectual Property	
Composites	Patents	Polymers	Adhesives	Market Development			

[View All \(50\) Skills](#)

John Hines, PhD's Publications

Clay Binder Enhanced Extraction of Bitumen from Canadian oil Sand

2012 SME Annual Meeting & Exhibit, Seattle, Washington | February 19, 2012

Authors: Guanyang Xu, Daniel Tao, Pablo Dopico, John Hines, PhD, Scott Johnson, Dennis Kennedy

Abstract: A clay binding agent has been investigated to enhance flotation recovery of bitumen from Canadian high fines oil sand in the Clark Hot Water Extraction (CHWE) process. Selective adsorption on fine particles and subsequent agglomeration are critical for the success of clay binder enhanced oil sand flotation. A number of flotation tests have been performed at different reagent dosages under different operating conditions such as pulp pH to evaluate the reagent performance. Dissipative Quartz Crystal Microbalance (QCM-D) analyses of clay binder adsorption on quartz were carried out to better understand process mechanisms. It has been found that use of clay binder in flotation resulted in an absolute bitumen recovery increase of 18%, 25%, and 11% for the high-, medium-, and low-grade oil sand samples, respectively. The QCM-D analyses have revealed that the clay binder was strongly adsorbed on the SiO₂ surface.

less

Phosphate Flotation Enhancement Using Clay Binder

6th International Conference on Phosphate Beneficiation, Kunming, China 3/6/2011 and published | March 6, 2011

Authors: Jue Kou, Guangyang Xu, Daniel Tao, John Hines, PhD, Pablo Dopico, Dennis Kennedy

Abstract: This study was conducted to evaluate the performance of two novel clay binders (GP® 586G58 and GP® 374G33 depressants) developed by Georgia-Pacific Chemicals LLC in enhancing phosphate flotation by agglomerating and depressing clay particles. Mechanical flotation tests were carried out using two different phosphate samples from two different phosphate companies in the USA (Utah and Florida). The flotation test results show that a significant increase of 5% in flotation recovery was achieved using GP® 586G58 depressant with phosphate sample A. Approximately 2.5% increase in flotation recovery was also achieved using GP® 586G58 or GP® 374G33 depressant with phosphate sample B. The optimum process conditions such as binder dosage and conditioning time were determined experimentally for both phosphate samples.

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High Performance Fatty Acid Collectors for Phosphate Flotation

6th International Conference on Phosphate Beneficiation, Kunming, China 3/6/2011 and published | March 6, 2011

Authors: Jue Kou, Guangyang Xu, Daniel Tao, John Hines, PhD, Pablo Dopico, Dennis Kennedy

ABSTRACT: In this paper a number of refined fatty acid reagents developed by Georgia-Pacific Chemicals LLC were investigated as the collector for flotation of phosphate ore from a phosphate company in Utah, USA. The laboratory flotation tests were carried out at different process parameters such as pH and collector dosage with both lab deslimed sample and plant deslimed samples in comparison with the collector that was in use at the plant. The results show that collector GP® 0621 was considerably more effective than the collector that was in use at the plant at dosages from 0.35 to 0.65 lb/t. The highest recovery of 73.7% was achieved with GP® 0621, which was 5.7% higher than with the plant collector. Higher pulp pH was found to have positive effects on phosphate flotation.

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Novel Coal Collector Derived from Pine Tree Pulping

SME 2011 Annual Meeting, Denver, CO | February 27, 2011

Authors: John Hines, PhD, Dennis Kennedy, Pablo Dopico

Abstract : Traditionally, fuel oil or diesel was the collector of choice in coal flotation, but in recent years these materials have come under increased scrutiny because of concerns about the toxicity of some components. In response to these concerns, Georgia-Pacific Chemicals LLC has commercialized a patent pending coal collector (Talon® 9400 reagent) that is 100% derived from the pulping of trees. This study presents a comparison of yields and recoveries for different coal collectors, including the one derived from the pulping of trees. less

An Experimental Study of Clay Binders in Fine Coal Froth Flotation

XVI International Coal Preparation Congress | April 29, 2010

Authors: Daniel Tao, Pablo Dopico, John Hines, PhD, Dennis Kennedy

It is well known that clay particles in fine coal severely impede the froth flotation process. This is mainly due to the tiny size ... or huge specific surface area of clay particles that result in slime coating on the coal surface. Use of clay binders is a promising method for enhancing coal flotation performance since it can agglomerate clay particles to enlarge their apparent size, and reduce their surface area and reagent adsorption, remove coal surface slime coating to restore its hydrophobicity and minimize non-selective hydraulic entrainment. less

Evaluation of Novel Georgia Pacific Clay Binders in Iron Ore Flotation

Minerals & Metallurgical Processing; Vol. 27 | February 15, 2010

Authors: Daniel Tao, Xiaohua Zhou, Pablo Dopico, John Hines, PhD, Dennis Kennedy

Abstract: Reverse cationic flotation is the most widely utilized flotation method for concentrating iron ore. In this process, quartz is often floated with ether amines (R-O-(CH₂)₃-NH₂) partially neutralized with acetic acid. However, it is well known that the cationic flotation of quartz does not work well if a certain amount of slime is present in the ore slurry. To improve flotation performance, starch is often added to the flotation feed to selectively flocculate and depress the iron minerals and sodium silicate is used to disperse the silica gangue. The present study was conducted to improve the efficiency of iron ore flotation by the use of a new type of depressant for clay and iron minerals, Georgia Pacific (GP) clay binder. The GP clay binder minimizes slime adsorption on quartz and hematite particles by agglomerating clay particles to reduce their surface area. It also helps depress hematite flotation due to its unique chelating action on iron ions. The results from this study show that the GP clay binder is an effective depressant in iron ore flotation. When it was used as a substitute for corn starch, it increased concentrate grade from 60.78% to 67.67% and increased iron recovery from 71.96% to 72.90%. The combined use of GP clay binder with corn starch produced even better flotation performance, increasing iron recovery to 78.15%, while the concentrate grade remained stable at 67.08%. less

Improved Phosphate Flotation Using Clay Binder

Separation Science and Technology, Vol. 45, No 6 | January 15, 2010

Authors: Daniel Tao, Xiaohua Zhou, Pablo Dopico, John Hines, PhD, Dennis Kennedy

ABSTRACT: The presence of insoluble clay slimes in phosphate ore adversely affect phosphate flotation performance. In this study, the feasibility of using a clay binder as slime depressant for phosphate flotation was investigated by conducting batch mechanical flotation tests using a 16-200 mesh phosphate sample under various operating conditions. The flotation process parameters examined for their impacts on clay binder performance included collector dosage, binder dosage and conditioning time, flotation time, etc. Results have shown that use of 0.1 lb/t clay binder increased phosphate yield and recovery by 1.7% and 5.5% respectively with a two min. flotation time. The concentrate grade was essentially constant at about 24%. The highest yield of 16.09% and the highest recovery of 91.01% were obtained with 0.25 lb/t clay binder. less

Evaluation of Novel Clay Binders/Depressants in Iron Ore Flotation

2009 SME Annual Meeting, Denver, Co | February 22, 2009

Authors: Daniel Tao, Xiaohua Zhou, John Hines, PhD, Pablo Dopico, Dennis Kennedy

Synergistic Combination of Depressants for Iron Ore Flotation

2nd International Symposium on Iron Ore, Sao Luis City, Maranhao State, Brazil | September 25, 2008

Authors: Armando Correa de Araujo, Paulo Viana, Antonio Carlos Papes, John Hines, PhD, Risia Papini

Optimizing the Use of Depressants in Iron Ore Flotation

2nd International Symposium on Iron Ore, Sao Luis City, Maranhao State, Brazil, | September 25, 2008

Authors: Armando Correa de Araujo, Paulo Viana, Antonio Carlos Papes, John Hines, PhD, Risia Papini

Performance Evaluation of Clay Binders in Potash Flotation

2008 SME Annual Meeting & Exhibit, Salt Lake City, UT | February 27, 2008

Authors: Daniel Tao, Maoming Fan, John Hines, PhD, Dennis Kennedy

Performance Evaluation of Clay Binders in Phosphate Flotation

Beneficiation of Phosphates V Conference, Rio de Janeiro, Brazil | February 18, 2008

Authors: Daniel Tao, John Hines, PhD, Dennis Kennedy

Phenolic Resins

2002 Proceedings Decorative and Industrial Laminates Symposium | August 20, 2002

Authors: William Freese, John Hines, PhD

Novel Melamine Resins

2000 Proceedings TAPPI Plastic Laminates Symp. | August 22, 2000

Authors: Kelly Shoemake, John Hines, PhD, Ben Gapud

The 1-methyl-5-hexenyl Cyclizable Probe for Detecting Alkyl Anions and Alkyl Radicals

Univ. Georgia, Athens, GA, Avail.: Univ. Microfilms Int., No. DA8621642, from Diss. Abstr. Int. B 47(6) 2436-7 | 1986

Authors: John Hines, PhD

The 1-methyl-5-hexenyl probe is a useful mechanistic tool for distinguishing between alkyl radical and alkyl anion intermediates in reduction and substitution reactions.

Suppressing the Cyclization of (1-Methyl-5-hexenyl)sodium

Tet. Lett., Vol.27, issue 18, p 1963 | 1986

Authors: John F. Garst, John Hines, PhD, John Bruhnke

In reactions of 1-methyl-5-hexenyl chloride and bromide with sodium metal and sodium naphthalene in DME and THF, the cyclization of (1-methyl-5-hexenyl) sodium is suppressed by added tert-butylamine. Since the cyclization of 1-methyl-5-hexenyl radical does not appear to be affected, this demonstrates the practicality of using the 1-methyl-5-hexenyl group as a probe for radical intermediates in the... more

Reductions of 1-Methyl-5-hexenyl Halides by Potassium Naphthalene and Potassium Metal

Book of Abstracts, 190th ACS National Meeting, ORGN 0119 | 1985

Authors: John F. Garst, John Hines, PhD

Unusual Nucleophilic Substitutions

Book of Abstracts, 187th ACS National Meeting, ORGN 0062 | 1984

Authors: John F. Garst, John Hines, PhD

Cyclization of (1-Methyl-5-hexenyl)-sodium in Ethers

J. Am. Chem. Soc., 106, 6443 | 1984

Authors: John F. Garst, John Hines, PhD

Reactions of 1-methyl-5-hexenyl chloride and bromide in ethers with sodium naphthalene and sodium mirrors at room temperature and 0C give large amounts of cis and trans 1,2-dimethylcyclopentane.

Chemical Processing of Liquid Lithium Fusion Reactor Blankets

Proc. Intersoc. Energy Convers. Eng. Conf., 14th(Vol. 2), American Chemical Society, Boston, Massachusetts 1572 | August 5, 1979

Authors: J. R. Weston, Wallis Calaway, R. M. Yonco, John Hines, PhD, Victor Maroni

A 50-gallon-capacity lithium loop constructed mostly from 304L stainless steel has been operated for over 6000 hours at temperatures in the range from 360 to 480/sup 0/C. This facility, the Lithium Processing Test Loop (LPTL), is being used to develop processing and monitoring technology for liquid lithium fusion reactor blankets. Results of tests of a molten-salt extraction method for removing... more

Control of Impurities in Forced-Circulation Lithium Loop Systems

Corrosion/79 (Preprints) pt 2, paper # 116 | 1979

Authors: J. R. Weston, Wallis Calaway, R. M. Yonco, John Hines, PhD, Victor Maroni

John Hines, PhD's Patents

Dedusting Compositions and Methods for Making and Using the Same

United States Patent 8580139 | Issued November 12, 2013

Inventors: Brian Swift, Lisa Arthur, Kelly Shoemake, John Hines, PhD, Michael Peck, Pablo Dopico

Compositions for reducing the formation of dust and methods for making and using same are provided. The composition can include an emulsion comprising one or more pitches, one or more fatty acids, one or more rosins, or any combination thereof. The composition can also include one or more film forming polymers, one or more oils, or a combination thereof.

Pitch Emulsions

United States Patent 8557138 | Issued October 15, 2013

Inventors: Lisa Arthur, John Hines, PhD, Brian Swift, Pablo Dopico, Michael Peck, R. Scott Johnson

An emulsion of pitch in water preferably characterized by having a lower level of tack on drying by virtue of using as the emulsifying agent a fatty acid, a chemically modified fatty acid, a rosin acid, a chemically modified rosin acid, or combinations thereof, especially a tall oil fatty acid, or a chemically modified tall oil fatty acid, where the pitch emulsion is useful for reducing the... more

Materials and Process for Enhancing Selective Separations

United States Patent 8,425,781 | Issued April 23, 2013

Inventors: John Hines, PhD, Brian Swift, Pablo Dopico

Use of a Maillard reaction product as an adjuvant in a variety of applications including solid-liquid separations, corrosion inhibition, emulsification, dust suppression, slow release fertilization, viscosity modification and others and especially as a depressant or collector in separation processes, including the selective separation of solids and/or ionic species from aqueous media, such as in... more

Collectors

United States Patent 8,403,146 | Issued March 26, 2013

Inventors: Phil Hurd, John Hines, PhD

Collectors for froth flotation including oxidized fatty acid compositions and oxidized and maleated compositions. In particular, use of oxidized tall oil compositions and oxidized and maleated fatty acid compositions are disclosed.

Materials and Process for Enhancing Selective Separations

United States Patent Application 20130217791 | Filed March 20, 2013

Inventors: John Hines, PhD, Brian Swift, Pablo Dopico

This patent application is a divisional of USP 8,425,781

Collectors

United States Patent Application 20130168594 | Filed February 26, 2013

Inventors: Phil Hurd, John Hines, PhD

This patent application is a divisional of USP 8,403,146

Preparation of Polymeric Resins and Carbon Materials

United States Patent Application 20130209348 | Filed February 8, 2013

Inventors: Frank Ludvik, Xing Dong, Shahid Qureshi, John Hines, PhD, Gerald Knazek, Renette Richard, Katharine Geramita, Henry Constantino, Aaron Feaver, Avery Sakshaung, Benjamin Kron

The present application is directed to methods for preparation of polymer particles in gel form and carbon materials made therefrom. The carbon materials can have enhanced electrochemical properties and find utility in any number of electrical devices, for example, as electrode material in ultracapacitors or batteries.

Oxidized and Maleated Compounds and Compositions

United States Patent 8,334,363 | Issued December 18, 2012

Inventors: Phil Hurd, Gary Fultz, Brett Neumann, John Hines, PhD

Oxidized and maleated compositions, such as oxidized and maleated tall oil compositions, can be prepared and used in a variety of industrial applications, including as emulsifiers and corrosion inhibitors.

Azetidinium-Functional Polysaccharides and Uses Thereof

United States Patent 8,252,866 | Issued August 28, 2012

Inventors: Michael Bush, John Hines, PhD, James Wright

The present invention relates to polysaccharides that have been modified by providing azetidinium functionality thereto. Such functionality can be provided by crosslinking a polysaccharide with a resin having azetidinium functional groups. In one or more aspects, the polysaccharide can comprise one or more of starch, guar gum, alginate or derivatives thereof. Polysaccharides having azetidinium... more

Method for Inhibiting Ice Formation and Accumulation

United States Patent 8,226,848 | Issued July 24, 2012

Inventors: Pablo Dopico, Kurt Gabrielson, John Hines, PhD, Brian Swift, Dennis Kennedy

This a divisional application of U. S. Patent 8,048,332

Modified Binders for Making Fiberglass Products

United States Patent 8,193,107 | Issued June 5, 2012

Inventors: Kim Tutin, John Hines, PhD, Stacey Wertz, Kelly Shoemake, Ramji Srinivasan

Binder compositions for making fiberglass products and methods for making and using same are provided. The binder composition can include a phenol-aldehyde resin or a mixture of Maillard reactants and one or more modifiers selected from the group consisting of a copolymer comprising one or more vinyl aromatic derived units and at least one of maleic anhydride and maleic acid; an adduct of styrene,... more

Modified Binders for Making Fiberglass Products

United States Patent Application 20120208935 | Filed April 26, 2012

Inventors: Kim Tutin, John Hines, PhD, Stacey Wertz, Kelly Shoemake, Ramji Srinivasan

This is a divisional application of U. S. Patent 8,193,107

Oxidized and Maleated Derivative Composition

United States Patent 8,133,970 | Issued March 13, 2012

Inventors: Phil Hurd, R. Scott Johnson, John Hines, PhD, Brett Neumann, + Add another inventor

Oxidized and maleated derivative compositions, such as chemically modified oxidized and maleated tall oil fatty acid compositions, can be prepared and used in a variety of industrial applications, including as emulsifiers, corrosion inhibitors, concrete admixtures, and in reverse flotation mining applications.

Amine-Aldehyde Resins and Uses in Separation Processes

United States Patent 8,127,930 | Issued March 6, 2012

Inventors: James Wright, Lisa Arthur, Kurt Gabrielson, John Hines, PhD, Jeffrey Mills, Michael Cousin, Carl White

This is a divisional application of U.S. Pat. Appl. 20060151397

Modified Amine-Aldehyde Resins and Uses in Separation Processes

United States Patent 8,092,686 | Issued January 10, 2012

Inventors: James Wright, Kurt Gabrielson, Lisa Arthur, John Hines, PhD, Michael Cousin, Carl White

Modified resins are disclosed for removing a wide variety of solids and/or ionic species from the liquids in which they are suspended and/or dissolved. These modified resins are especially useful as froth flotation depressants in the beneficiation of many types of materials (e.g., mineral and metal ores),

including the beneficiation of impure coal comprising clay impurities, as well as in the... more

Method for Inhibiting Ice Formation and Accumulation

United States Patent 8,048,332 | Issued November 1, 2011

Inventors: Pablo Dopico, Kurt Gabrielson, John Hines, PhD, Brian Swift, Dennis Kennedy

The present invention relates to a method for inhibiting the formation or accumulation of ice on a solid surface and for reducing the salt out temperatures.

Modified amine-aldehyde resins and uses thereof in separation processes

United States Patent 8011514 | Issued September 6, 2011

Inventors: James Wright, Kurt Gabrielson, Lisa Arthur, John Hines, PhD, Carl White, Mike Cousin

A divisional patent of USP 7,913,852

Modified amine-aldehyde resins and uses thereof in separation processes

United States Patent 7913852 | Issued March 29, 2011

Inventors: James Wright, Lisa Arthur, Kurt Gabrielson, John Hines, PhD, Carl White, Phillip Hurd, Peter Boyer, Paul Hart, Richard Rediger, Robbie Kelly

This is a divisional application of U.S. Pat. Appl. 20070000839. Modified resins are disclosed for removing a wide variety of solids and/or ionic species from the liquids in which they are suspended and/or dissolved. These modified resins are especially useful as froth flotation depressants in the beneficiation of many types of materials (e.g., mineral and metal ores), including the beneficiation... more

Formaldehyde-Free Binder

United States Patent 7803879 | Issued September 28, 2010

Inventors: Ramji Srinivasan, Kurt Gabrielson, John Hines, PhD, Cornel Hagiopol

An aqueous, formaldehyde-free binder composition comprising a modified copolymer of maleic anhydride and a vinyl aromatic compound such as styrene, the copolymer being modified by reaction with a primary alkanolamine, such as monoethanolamine (MEA), to produce a modified copolymer that is self-curing and cures as a consequence of cross-linking, esterification reactions between pendant carboxyls... more

Formaldehyde-Free Binder

United States Patent 7795354 | Issued September 14, 2010

Inventors: Ramji Srinivasan, Kurt Gabrielson, John Hines, PhD, Cornel Hagiopol

An aqueous binder composition, useful for making fiber products, especially fiberglass insulation, comprising an aqueous substantially alkaline (pH of at least 5.0) solution of a polyol and a hydrolyzed (solubilized) copolymer of maleic anhydride and a vinyl aromatic compound, preferably styrene (i.e., a SMA copolymer); the copolymer is solubilized using ammonia, a secondary alkanolamine (... more

Formaldehyde-Free Binder

United States Patent Application 20100029160 | Filed February 4, 2010

Inventors: Ramji Srinivasan, Kurt Gabrielson, John Hines, PhD, Cornel Hagiopol

This is a divisional application of U.S. Pat. No. 7,795,354.

Polyester Type Formaldehyde Free Insulation Binder

Europe Patent EU Patent 1517959 | Issued March 11, 2009

Inventors: Kim Tutin, Ramji Srinivasan, John Hines, PhD, Kurt Gabrielson, Cornel Hagiopol, Carl White, Augie Rodriguez

An aqueous binder composition containing a substantially infinitely water-dilutable or dispersible adduct of a monomeric polycarboxylic acid component (polybasic acid) and a monomeric polyol component (i.e., a polyester) and the related method of its use for making glass fiber products, especially fiberglass insulation.

Method for the Froth Flotation of Coal

United States Patent Application 20090194466 | Filed January 15, 2009

Inventors: John Hines, PhD, Dennis Kennedy, Phil Hurd

The present invention relates to the beneficiation of coal by the process of froth flotation and specifically relates to a process for the froth flotation of coal using a collector consisting essentially of a fatty acid monoester of a polyol, a fatty acid diester of a polyol, or a mixture thereof.

Method for the Beneficiation of Coal

United States Patent Application 20090178959 | Filed January 15, 2009

Inventors: John Hines, PhD, Dennis Kennedy, Phil Hurd

The present invention relates to the beneficiation of coal by the process of froth flotation and specifically relates to a process for the froth flotation of coal using a mixture of fatty acids and rosin acids (and/or certain derivatives of fatty acids and rosin acids) as a collector.

Chemical Modification of Maleated Fatty Acids

United States Patent Application 20090065736 | Filed July 2, 2008

Inventors: R. Scott Johnson, Phil Hurd, John Hines, PhD, Brett Neumann, Scott Johnson

Chemically modified maleated fatty acid compositions and the salts thereof, especially chemically modified tall oil fatty acid containing compositions are useful in formulating corrosion inhibitors, as emulsifiers, as collectors in mining applications, and as cross-linking agents, such compositions find particular utility for petroleum-related applications.

Amine-Aldehyde Resins and Uses in Separation Processes

United States Patent Application 20070012630 | Filed January 18, 2007

Inventors: James Wright, Kurt Gabrielson, Lisa Arthur, John Hines, PhD, Michael Cousin, Carl White

This is a divisional application of U.S. Pat. Appl. 20060151397.

Amine-Aldehyde Resins and Uses in Separation Processes

United States Patent Application 20060151397 | Filed December 12, 2005

Inventors: James Wright, Kurt Gabrielson, Lisa Arthur, John Hines, PhD, Phillip Hurd, Peter Boyer, Jeffrey Mills, Paul Hart, Carl White

Amine-aldehyde resins are disclosed for removing a wide variety of solids and/or ionic species from the liquids in which they are suspended and/or dissolved. These resins are especially useful as froth flotation depressants in the separation of bitumen from sand and/or clay or in the beneficiation of clay (e.g., kaolin clay) from an impure clay-containing ore. The resins are also useful for... more

Epoxide-Type Formaldehyde Free Insulation Binder

United States Patent Application 20040034154 | Filed June 4, 2003

Inventors: Kim Tutin, Pablo Dopico, Kurt Gabrielson, John Hines, PhD, Carl White, Shahid Qureshi

An aqueous binder composition containing a substantially infinitely water-dilutable or dispersible mixture of an epoxide and an epoxide crosslinking agent and the related method of its use for making glass fiber products, such as fiberglass insulation.

Urea-Formaldehyde Resin Binders Containing Styrene Acrylates and Acrylic Copolymers

United States Patent 6642299 | Issued November 4, 2003

Inventors: Stacey Wertz, George Anderson, Kurt Gabrielson, John Hines, PhD, William King

An aqueous binder composition containing a urea-formaldehyde resin modified with an additive comprising (1) styrene acrylic acid or styrene acrylate, (2) an adduct of styrene, maleic anhydride, and an acrylic acid or acrylate or (3) a physical mixture of a styrene acrylic acid or styrene-acrylate copolymer and a styrene-maleic anhydride copolymer. The resulting binder is used in the preparation of... more

Colorants and intermediates therefor having branched poly(oxyalkylene)moieties, and their manufacture

United States Patent 5591833 | Issued January 7, 1997

Inventors: John Hines, PhD, David Moody, Edward Kluger

Colorants and compositions useful as a fugitive or permanent colorant for a variety of substrates, or as intermediates for their manufacture, and having one or more improved properties of enhanced aqueous washability, compatibility with and non-extractibility from thermoplastic resins, or reactivity with resins having reactive functionality, said composition having the formula C(Z)1-8 wherein: C... more

Poly(oxyalkylene) substituted xanthene colorant and method for making the same

United States Patent 5331097 | Issued July 19, 1994

Inventors: Timothy Gunnell, John Hines, PhD, Carey Barry

A diamino-xanthene colorant is provided having a poly(oxyalkylene) substituent with a straight or branched polymer chain of at least 3 monomer units selected from ethylene oxide, propylene oxide, butylene oxide and glycidol. The colorant is synthesized by condensing two moles of an N,N-bis(poly(oxyalkylene))-p-methoxyaniline and o-formylbenzene sulfonic acid.

Azo Dimer and Trimer Fugitive Tints

United States Patent 5108460 | Issued April 28, 1992

Inventors: John Hines, PhD, Carey Barry

Azo chromophores having polyoxyalkylene substituents are linked together by a covalent bond or by an intervening connecting group to form dimers or trimers. The polyoxyalkylene substituents are straight or branched chain polymers primarily of ethylene oxide which make the dimer and trimer colorants useful as fugitive tints.

Method for Temporarily Coloring Article with Acid Labile Colorant

United States Patent 5071440 | Issued December 10, 1991

Inventors: John Hines, PhD, John Lever

A process for providing temporary coloration to an article, e.g. textiles, comprises applying a soln. of a colorant in amt. sufficient to provide coloration wherein the colorant is a straight or branched polyoxyalkylene-substituted azomethine or indophenol chromophore, the chromophore having a C=N pair with an electron withdrawing group bonded to one element of the pair and an electron donating... more

Fugitive Colorant and Washable Ink Compositions

United States Patent 5059244 | Issued October 22, 1991

Inventors: Cliff King, John Hines, PhD

An aqueous solution of a chromophore having at least one sulfonic acid or carboxylic acid functionality and a triethanolamine ethoxylate is provided for a fugitive colorant useful in ink formulations or to temporarily tint textile fibers. Preferably the triethanolamine ethoxylate contains at least nine moles of -CH₂ CH₂O- units and is present in a molar excess per acid functionality of the chromophore.

Irradiation detection and identification method and compositions useful therein

United States Patent 4992204 | Issued February 12, 1991

Inventors: Edward Kluger, John Hines, PhD, John Lever, Patrick Moore

A method for tagging one or a mixture of natural or synthetic materials comprising contacting the same with one or a mixture of tagging compounds containing one or more non-ionic luminophore moieties attached to at least one poly(oxyalkylene) moiety by means of a linking moiety; wherein said tagging compound has substantial absorbance within the range of from about 300 to about 400 nm and reemits... more

Reactive, Non-yellowing Triazine Compounds Useful as UV Screening Agents for Polymers

United States Patent 4962142 | Issued October 9, 1990

Inventors: Cyril Migdal, John Hines, PhD, Edward Kluger

This is a division of U.S. Pat. No. 4,826,978.

Amine-Reducible Fugitive Tints for Color Monitoring the Level of Finish Applied to Textile Materials and for Color Coding Textile Materials

United States Patent 4877411 | Issued October 31, 1989

Inventors: John Hines, PhD, Jeffrey Harris

A method is provided for temporary coloration of textile materials which comprises applying to said textile materials an amine-reducible tint in an amount sufficient to provide coloration to said textile material, said tint being characterized by the formula: where RA is the organic, easily reducible dyestuff radical, A is a linking moiety in said organic, easily reducible dyestuff radical... more

Preparation of Reactive, Non-yellowing Triazines Useful as UV screening Agents for Polymers

United States Patent 4826978 | Issued May 2, 1989

Inventors: Cyril Migdal, John Hines, PhD, Edward Kluger

Triazine compounds are disclosed which are useful for imparting UV screening properties to polymers. Also disclosed are polymer compositions having improved UV screening properties containing said triazine compounds.

John Hines, PhD's Education

University of Georgia

PhD, Organic Chemistry

1979 – 1985

Eckerd College

BA, Chemistry

1974 – 1979

Activities and Societies: Summer Employment: 1) Fortia/Pharmacia, Uppsala, Sweden, Summer 1979 synthesized derivatives of Azulfidine, a drug used to treat colitis. 2) Oak Ridge National Laboratory, summer 1977 worked with a team that developed a high lysine barley by subjecting barley tissue culture to a toxic lysine analog.

John Hines, PhD's Additional Information

Interests: **New Technology, Business Development, New Product Development, Innovation, Managing Innovation, Managing Innovative Businesses, R&D Management, Chemical Research,**

Groups and Associations:  **China Mining & Metallurgy Industry Club**



Mining and Metals Professionals Globally

Honors and Awards:
 > Georgia-Pacific Chemicals R&D Technical Recognition Award 2004
 > TAPPI Plastic Laminates Symposium, Conference Chairman 2000, Vice-Chairman 1998, Secretary 1996, Session Chairman 2002 & 1994.
 > Milliken and Co. Inventors Hall of Fame, 1991
 > IAESTE (International Association for the Exchange of Students for Technical Experience) Exchange Student – A. B. Fortia/Pharmacia, Uppsala, Sweden 1979
 > Undergraduate Research Associate, Oak Ridge National Laboratory 1977

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