

Chapter 1 : Fall /Spring - Organic Seminar Abstracts | Chemistry at Illinois

Organic seminar abstracts. //82 pt. 1 i»¿ University of Illinois at Urbana-Champaign. Department of Chemistry (Urbana, Ill.: Dept. of Chemistry and Chemical Engineering, University of Illinois at Urbana-Champaign,).

Concepts to be developed include: CH Molds - Causes, Prevention and Remediation This seminar is directed primarily toward engineers involved in the prevention and remediation of molds. The exposure to molds that cause a variety of negative health effects will be discussed as well as the advantages and disadvantages of the recent technology remediation options. The economic and sociopolitical issues involved with each are also included. CH Renewable Hydrogen Systems Part 1 This seminar will examine the different types of renewable energy systems that are available using present technologies. There will be a presentation of the properties of hydrogen and a comparison between hydrogen and other energy options. Practical ways to build sustainable hydrogen energy systems will also be discussed. Nuclear energy has the potential to address the need but it has problems of its own that makes it less than ideal. This lecture will present the technical and political arguments for and against expanding nuclear fission-based energy production. CH H azardous Waste Management This seminar introduces the attendees to the structure of the regulations governing hazardous waste management. It begins with a detailed analysis of the definitions of solid waste and hazardous waste, including how to perform hazardous waste determinations. Specific emphasis is placed on the development of operating procedures and self-auditing considerations for the proper management of hazardous wastes. The toxicological impact from exposure to many different chemicals is discussed. The seminar concludes with a review of the OSHA regulations applicable to emergency responses and emergency responders. TOP CH Alternative Fuels for Electrical Power Generation Global warming concerns versus the need for more power to accommodate the requirements of a growing worldwide population have resulted in debates to identify technologies that can meet the demand while simultaneously reducing greenhouse gases. Coal, the most commonly used source of energy to generate base-load electrical power, is a primary source of the greenhouse gases that contribute to global warming. Research is underway to gasify and liquefy coal in an effort to reduce its harmful emissions when used for power generation and to create an alternate source of diesel fuel. However, the farmland required to grow the feedstock reduces the amount of land required to grow important food crops, i. The basics of these technologies, their economics, and the political arguments for and against each of these technologies will be presented and contrasted. CH Mass Transport Phenomena This seminar covers the fundamentals, both steady and transient, of the transport of material within process equipment and in the environment. Unit operations such as distillation, extraction, filtration and adsorption are covered. Additionally, the environmental aspects of the transport of chemicals between air, water, soil, and biota are introduced along with examples and case studies. The seminar is divided into three subject areas: Is the rate of climate change increasing? Is human activity to blame? These are questions many people around the world are asking in light of warmer winters, hotter summers, and severe storms, draught, expanding deserts and melting polar ice caps. However we may not be able to answer these questions with high degree of certainty because climate changes, unlike weather patterns, occur over periods of thousands of years and not within the time span of a few generations. CH Renewable Hydrogen Systems Part 2 This seminar will focus on the specific engineering details that are require for designing and building a practical alkaline based electrolysis system. Detailed information will be derived from real world experience of a renewable powered electrolyser that produces fuel cell grade hydrogen at PSI. Topics include voltage requirements, cell efficiencies, temperature, and pressure considerations, monitoring requirements. CH Disinfection of Water and Wastewater This seminar will include a review of chemistry and fundamentals of chlorine, ultraviolet and ozone. The inactivation of microorganisms using ultraviolet irradiation, UV dosimetry and bioassay methods, photo-recovery, and field-testing will be investigated. The presentation will conclude with a review of ozone and other methods noted as water and wastewater disinfectants. CH Asbestos Investigations as per EPA Protocols This seminar will address various aspects of asbestos remediation parameters and treatment protocols. It will also discuss the medical hazards of concerning asbestos, the U. Law passed in , and the

causes of Asbestosis and Mesothelioma. The advantages and disadvantages of various methods of asbestos remediation will be addressed as well as the labor requirements for asbestos workers as per the NYS Department of Labor. Decontamination procedures will be discussed including waste handling procedures and waste disposal requirements. The course will conclude with discussions on asbestos legalities, liabilities and possible future usage of asbestos. There will be a review of lead applications from ancient times to the present. Then there will be discussions of the chemical characteristics of lead that will entail its positive and negative attributes. Remediation will be review of the procedures used to remove lead from walls and metals and the biological treatment for human ingestion. The lecture will conclude with the standards and procedures that must be used for lead applications as outlined in existing codes such as the National Ambient Air Quality Standards NAAQS and the Water pollution control Act of Approximately one quarter of all the nuclear power plants is located in the United States with one quarter of all US plants located in the Northeast. The existing plants are aging and will require renovation. The current difficulties with fossil fuel supply and its rising price along with nuclear powers half century of commercial operation have engendered renewed interest in nuclear power as a potential source of clean energy. The intention and objectives of this course is to familiarize the professionals with fundamentals, radiation, technologies, infrastructure, safety issues, advantages and disadvantages and the safeguard of the industry.

TOP CH Reservoir Management Limnology This seminar will be a review of the principles of limnology, including the formation and categories of lakes and reservoirs. Physical stratification and chemical, physical and biological characteristics and behavior of lake water and the associated lake sediments will be discussed. A survey of water quality parameters, quality changes, common problems, causes and short and long term control methods will be investigated as well as considerations of impact assessment approaches related to proposed activities.

CH Bio-Solids Waste Management This seminar will be a review of the source and makeup of bio-solids, their physical, chemical and biological nature. Also discussed will be the handling and disposal considerations. The treatment and handling of bio-solids to will include anaerobic digestion and composting of bio-solids and how it is combined with other organic substrates such as leaves, grass residues, food residues and refuse.

Fisher-Tropsch Conversion Process Part 1 Fischer-Tropsch Synthesis FTS is the key step in the manufacture of liquid hydrocarbon fuels from a variety of carbon based sources, including gas, coal, shale, biomass, and waste. The purpose of FTS is to produce a synthetic oil substitute, for use as lubricants or synthetic automotive, truck and aircraft fuel. FTS involves a catalyzed chemical reaction in which synthesis gas carbon monoxide and hydrogen is converted into liquid hydrocarbons of various forms. Synthesis gas is easily manufactured via steam reforming of hydrocarbons or more likely partial oxidation or POX. In this seminar, a snapshot of the current energy utilization picture in the United states will be presented as well as the opportunity for FTS. The chemistry and processing of the FTS process will be reviewed. The political goal was to provide energy independence for Germany which was rich in coal but had little petroleum. Nowadays, the FTS process is established technology and has been applied on a large scale in some countries. However, the popularity of the FTS is limited due to the low hydrogen content of some of the incoming fuels. This results in the need to reject carbon dioxide from the process, thus reducing yield and causing environmental concerns. Additionally, the low yield restricts the economic viability of FTS to situations in which alternatives for liquid fuels, such as petroleum are very costly. In this seminar the production and import of hydrogen gas into the FTS process will be presented. The required processing for the manufacture of low cost hydrogen will be discussed and the process integration with FTS process will be presented.

CH The Engineering and Economics of Bio-Fuel The production need to free the US from our dependence on foreign oil has motivated the rapid development of the bio-fuels industry. Further, the use of bio fuels has been proposed as a substitute for fossil fuels as a way to combat global warming. Finally, bio fuels derived from vegetation are considered a renewable resource. Photosynthesis, a complex biological enzymatic process, traps solar energy into the carbon-carbon bonds of organic carbohydrate polymers, and fat molecules. The bio fuel industry has developed chemical and biochemical processes to create smaller organic molecules, both liquid and gaseous, from these plant polymers suitable as fuels for automobiles, trucks, etc. The two most common liquid molecules are ethanol and bio-diesel; the most common gaseous molecule is methane. In this presentation, we will introduce the biochemical processes that form the organic polymers;

describe the prominent production schemes used to create bio-fuels, and evaluate the energy balance of the processes. We will examine the arguments for and against bio-fuel production. CH Biological and Chemical Evaluation of Water Quality Review of the fundamentals of water chemistry and the basic physical and chemical relationships and water quality parameters. Review of changes associated with microbiological components and dynamic relationships as applied to natural receiving water systems as well as in water and wastewater. The presentation will include economic implications of moving to a fusion based base-load energy generation system and the technical and political controversies surrounding a national investment in Fusion strategies versus "green" alternatives. With current high energy costs and new interest in the CHP processes, care must be taken with the analysis and considerations of integrating a CHP system with an existing facility. This seminar section will review industry definitions, prime movers, data gathering and financial modeling used to qualify a facility. CH Corrosion Failures in Structures and Prevention Techniques This seminar will discuss various types of corrosion mechanisms and failures that can result in significant structural damage. Actual examples will be discussed. Class participants will be encouraged to bring up additional examples that are work related for further class discussions. This course will also give the student an appreciation for many of the environmental factors that initiate corrosion mechanisms. CH Corrosion Mitigation by Cathodic Protection This seminar will explain how materials and structures can be protected from corrosion by cathodic protection by both passively and by impressed current. Examples will be explained for buried pipe lines and the factors that go into a good design of a corrosion protection system. The various impressed current systems will be shown plus calculations of current needs. Select examples that will be discussed to give the attendee an appreciation of how to initiate the design of such a system. These incidents have resulted in the release of varying amounts of radioactivity into the atmosphere and surrounding areas from damage to the reactor cores. The most recent incident occurred at the Daiichi plant in Fukushima, Japan as a result of a magnitude 9. This incident has renewed concern about nuclear fission reactor facilities as safe base-load electrical energy generation stations. This presentation will review the 12 incidents in chronological order covering their probable causes, remediation, radiation released and health effects. In fracking a high pressure fluid with suspended solid particles, known as proppants is injected into deep well-holes. Cracks are created in sedimentary rock and the proppant usually sand holds open the crack, releasing trapped oil and gas. Geological assessments indicate that there are enormous quantities of gas available for recovery via fracking in the eastern United States in the Marcellus Shale formation. In part 1 of this two part seminar a snapshot of the current natural gas mining procedures will be presented. CH Hydraulic Fracking; Technology, Economic, Health and Safety Issues Part 2 Environmental, Health, and Safety EHS concerns have developed over the process of fracking, with some of the biggest issues being the uncontrolled release of natural gas as well as the contamination of drinking water with natural and synthetic toxins including reportedly radioactive material. In this two part seminar, current and historic mining processes will be presented along with utilization and transportation options. In part 2 of this two part seminar the economic incentive as well as the key societal issues on both sides of the debate over fracking will be discussed. CH Environmental Remediation Awareness for Building Design Professionals This four hour lecture will briefly touch on common environmental issues and regulations that could come up during the operation of existing buildings or the design of new buildings.

Chapter 2 : Full text of "Organic seminar abstracts"

Organic Seminar Abstracts I Semester, by University of Illinois The Chemistry of the Diazo-Compounds by John Cannell Cain Explosives Materials The Phenomena and Theories of Explosion and the Classification, Constitution and Preparation of Explosives by John Philip Wisser.

Chapter 3 : ppt on seminar of organic display

*-d-1,1-dibromocyclohexane or 1-bromomethylcyclohexane rather than the observed products
Only small amounts of these were found in the reaction mixtures.*

Chapter 4 : IDEALS @ Illinois: Organic Seminar Abstracts

Spring Seminars Recent Advances in Base Metal-Catalyzed HAT Reactions with Unactivated Olefins Tanner Bingham
Spring-Loaded Compounds in Organic Synthesis Yaroslav Boyko.

Chapter 5 : CU-Analytical-Seminars - Jimenez Group Wiki

Although pentahelicene was synthesized as early as stereochemical appreciation of the helicenes can be said to date from Newman's classical synthesis of hexahelicene in The long sequences involved, however.

Chapter 6 : Seminars “ Department of Chemistry | CSU

Note: Citations are based on reference standards. However, formatting rules can vary widely between applications and fields of interest or study. The specific requirements or preferences of your reviewing publisher, classroom teacher, institution or organization should be applied.

Chapter 7 : Organic Seminar | Department of Chemistry | Washington State University

Notes. Light text appears in physical copy. Some text printed on edge of page may appear cropped. Some over-cropping done to display full text.

Chapter 8 : 11th International Poultry Show and Seminar - March - Poultry Producer

The abstracts should be written in English and must reflect the background and objective of the work, methodology, findings and conclusion. The technical committee will evaluate the abstracts as to their suitability for acceptance as oral or poster presentation and will invite to submit the full papers.

Chapter 9 : Organic Literature Seminar Abstracts | Chemistry at Illinois

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