Classics In Total Synthesis

Classics in Total Synthesis IIIClassics in Total Synthesis IVProgress in Total SynthesisEfficiency in Natural Product Total SynthesisClassics in Total SynthesisProgress in Total SynthesisMore Dead Ends and DetoursClassics in Total Synthesis IIClassics in total synthesisClassics in Total Synthesis Modern Sustainable Techniques In Total Synthesis Of Bioactive Natural Products Progress in Total Synthesis Total Synthesis of Natural Products Classics in Total Synthesis ITotal Synthesis of Natural Products, the "Chiron" ApproachProgress in Total SynthesisDead Ends and DetoursClassics in Total Synthesis IIFrom Biosynthesis to Total Synthesis The Total Synthesis of Natural Products, Volume 4 K. C. Nicolaou K. C. Nicolaou Sarah Danishefsky Pei-Qiang Huang K. C. Nicolaou Sarah Danishefsky Miguel A. Sierra K. C. Nicolaou Kyriacos C. Nicolaou K. C. Nicolaou Sasadhar Majhi Sarah Danishefsky Jie Jack Li K. C. Nicolaou Stephen Hanessian Sarah Etheredge Danishefsky Miguel A. Sierra K. C. Nicolaou Alexandros L. Zografos John ApSimon Classics in Total Synthesis III Classics in Total Synthesis IV Progress in Total Synthesis Efficiency in Natural Product Total Synthesis Classics in Total Synthesis Progress in Total Synthesis More Dead Ends and Detours Classics in Total Synthesis II Classics in total synthesis Classics in Total Synthesis Modern Sustainable Techniques In Total Synthesis Of Bioactive Natural Products Progress in Total Synthesis Total Synthesis of Natural Products Classics in Total Synthesis I Total Synthesis of Natural Products, the "Chiron" Approach Progress in Total Synthesis Dead Ends and Detours Classics in Total Synthesis II From Biosynthesis to Total Synthesis The Total Synthesis of Natural Products, Volume 4 K. C. Nicolaou K. C. Nicolaou Sarah Danishefsky Pei-Qiang Huang K. C. Nicolaou Sarah Danishefsky Miguel A. Sierra K. C. Nicolaou Kyriacos C. Nicolaou K. C. Nicolaou Sasadhar Majhi Sarah Danishefsky Jie Jack Li K. C. Nicolaou Stephen Hanessian Sarah Etheredge Danishefsky Miguel A. Sierra K. C. Nicolaou Alexandros L. Zografos John ApSimon

k c nicolaou winner of the nemitsas prize 2014 in chemistry adopting his didactically skillful approach k c nicolaou compiles in this textbook the important synthetic methods that lead to a complex molecule with valuable properties he explains all the key steps of the synthetic pathway highlighting the major developments in blue boxed sections and contrasting these to other synthetic methods a wonderful tool for learning and teaching and a must have for all future and present organic and biochemists

fourth volume of a classic in the field of organic synthesis describing retrosynthetic analysis and total synthesis of important molecules classics in total synthesis iv is a compilation of highly important synthetical methods which lead to a complex molecule with valuable properties from the complex architectures of natural products to the streamlined synthesis of functional molecules each chapter in classics in total synthesis iv unfolds a unique story the interplay of mechanisms reactivity selectivity and stereochemical aspects is thoroughly examined echoing the pedagogical format that has become synonymous with this series well designed graphics are included throughout and the most important parts of the reaction sequences are highlighted this volume encapsulates the culmination of new

methodologies emerging trends and a selection of significant total syntheses undertaken from 2009 to 2022 while additionally including two earlier syntheses from 1979 and 1992 for comparison and to highlight the development of organic synthesis over the past decades the careful balance between historical context comments on the molecules impact to humankind and the design and execution aspects of each synthesis creates a narrative that is not only clear but also intellectually stimulating written by k c nicolaou and co workers classics in total synthesis iv includes 16 chapters covering coupling and rearrangement reactions recent advances in nonenzymatic enantioselective cyclization cycloaddition and annulation reactions c h functionalization and transition metal mediated c h activation electroorganic chemistry and visible light photoredox catalysis hat initiated olefin hydrogenation isomerization and hydrofunctionalization joining its predecessors in weaving together the threads of scientific discovery challenge and intellectual pursuit and establishing strong connections with biology and medicine classics in total synthesis iv is an essential reference for all future and present organic chemists

this series stemmed from a group of weekly seminars in our research group aimed at keeping its members abreast of recent developments in organic synthesis the seminars tended to consist of several syntheses of natural products or related systems with particular emphasis on the general strategy inherent in the effort new and interesting reactions which were utilized in the work and specificity or the lack of it in arranging the relative stereochemistry of asymmetric centers and the geometry of double bonds we found that natural products offered an attractive setting in which the larger science of organic chemistry could be put to crucial tests a truly elegant synthesis is a major advance in that it epitomizes how an imaginative mastery of the course of organic reactions can achieve a sophisticated objective by an economy of operations indeed any successful synthesis of a reasonably complex product however cumbersome and graceless is an important event for those who delight in the problem solving dimension of science

uniting the key organic topics of total synthesis and efficient synthetic methodologies this book clearly overviews synthetic strategies and tactics applied in total synthesis demonstrating how the total synthesis of natural products enables scientific and drug discovery focuses on efficiency a fundamental and important issue in natural products synthesis that makes natural product synthesis a powerful tool in biological and pharmaceutical science describes new methods like organocatalysis multicomponent and cascade reactions and biomimetic synthesis appeals to graduate students with two sections at the end of each chapter illustrating key reactions strategies tactics and concepts and good but unfinished total synthesis synthesis of core structure before the last section compiles examples of solid phase synthesis and continuing flow chemistry based total synthesis which are very relevant and attractive to industry r d professionals

k c nicolaou winner of the nemitsas prize 2014 in chemistry this book is a must for every synthetic chemist with didactic skill and clarity k c nicolaou and e sorensen present the most remarkable and ingenious total syntheses from outstanding synthetic organic chemists to make the complex strategies more accessible especially to the novice each total synthesis is analyzed retrosynthetically the authors then carefully explain each synthetic step and give hints on alternative methods and potential pitfalls numerous references to useful reviews and the original literature make this book an indispensable source of further information special emphasis is placed on the skillful use of graphics and schemes retrosynthetic analyses reaction sequences and stereochemically crucial steps are presented in boxed

sections within the text for easy reference key intermediates are also shown in the margins graduate students and researchers alike will find this book a gold mine of useful information essential for their daily work every synthetic organic chemist will want to have a copy on his or her desk

this series stemmed from a group of weekly seminars in our research group aimed at keeping its members abreast of recent developments in organic synthesis the seminars tended to consist of several syntheses of natural products or related systems with particular emphasis on the general strategy inherent in the effort new and interesting reactions which were utilized in the work and specificity or the lack of it in arranging the relative stereochemistry of asymmetric centers and the geometry of double bonds we found that natural products offered an attractive setting in which the larger science of organic chemistry could be put to crucial tests a truly elegant synthesis is a major advance in that it epitomizes how an imaginative mastery of the course of organic reactions can achieve a sophisticated objective by an economy of operations indeed any successful synthesis of a reasonably complex product however cumbersome and graceless is an important event for those who delight in the problem solving dimension of science

success comes in many forms and in synthesis it can be a failure that results in their ultimate successful solutions this long awaited sequel to dead ends and detours retains the proven concept while featuring over 20 new case studies of failed strategies and their successful solutions in natural product total synthesis additionally computational models are used to discuss the problem in much more detail and to provide readers with additional information not found in the primary literature the topics range from classic synthetic reactions e g diels alder reaction metal mediated coupling reactions metathesis and asymmetric catalysis to the importance of protecting and activating groups this book will benefit not only graduate students in organic chemistry but also advanced researchers as they gain knowledge derived from the step by step analysis of mistakes made in the past and thus be able to improve their own chemical reaction planning with its coverage of the most commonly applied reaction types the book perfectly complements its predecessor which focuses on general aspects such as reactivity and selectivity

classics in total synthesis ii is the long awaited sequel to classics in total synthesis a book that has made its mark as a superb tool for educating students and practitioners alike in the art of organic synthesis since its introduction in 1996 in this highly welcomed second volume k c nicolaou and scott a snyder discuss in detail the most impressive accomplishments in natural product total synthesis during the 1990s and the first years of the 21st century while all of the features that made the first volume of classics so popular and unique as a teaching tool have been maintained in this new treatise the authors seek to present the latest techniques and advance in organic synthesis as they beautifully describe the works of some of the most renowned synthetic organic chemists of our time key features include systematically develops domino reactions cascade sequences biomimetic strategies and asymmetric catalysis through the chosen synthesis discusses cutting edge synthetic technologies in terms of mechanism and scope presents new reactions such as olefin metathesis in mini review style includes abundant references for further reading cd with useful teaching material for lecturers is included with hardback version isbn 3 527 30685 4 graduate students educators and researchers in the fields of synthetic and medicinal chemistry will wish to have a copy of this book in their collection as an indispensable companion that both augments and supplements the original classics in total synthesis from the reviews a volume which any chemist with an interest in synthetic organic

chemistry will wish to acquire jacs on the previous volume this superb book will be an essential purchase for many organic chemists nature on the previous volume classics ii is undoubtedly an excellent bargain that is highly recommended to everybody interested in advanced organic chemistry one of my co workers confessed that classics i was the book on his bedside table while he prepared his thesis defense isn t that the highest distinction for a monograph i have every reason to believe that classics ii will equally stand the selection process by students and probably their supervisors too angewandte chemie 2004 well there is a new pleasant read for the advanced student and even the experienced it is the second volume to the established classics in total synthesis and it continues the series extremely well chembiochem 2004 the real innovation of this volume is the inclusion of alternative pathways to the same target molecule by other researchers this enables the reader to appreciate that there are also other solutions to certain structural problems than those of the original synthesis let us hope that k c nicolaou and his associates will present us with these future achievements in the same clear informative and innovative format they have with the previous two volumes applied organometallic chemistry

k c nicolaou winner of the nemitsas prize 2014 in chemistry this book is a must for every synthetic chemist with didactic skill and clarity k c nicolaou and e sorensen present the most remarkable and ingenious total syntheses from outstanding synthetic organic chemists to make the complex strategies more accessible especially to the novice each total synthesis is analyzed retrosynthetically the authors then carefully explain each synthetic step and give hints on alternative methods and potential pitfalls numerous references to useful reviews and the original literature make this book an indispensable source of further information special emphasis is placed on the skillful use of graphics and schemes retrosynthetic analyses reaction sequences and stereochemically crucial steps are presented in boxed sections within the text for easy reference key intermediates are also shown in the margins graduate students and researchers alike will find this book a gold mine of useful information essential for their daily work every synthetic organic chemist will want to have a copy on his or her desk

modern sustainable techniques in total synthesis of bioactive natural products comprises five parts for green tools such as ultrasonic waves microwave heating visible light photochemistry organic electrochemistry and flow chemistry along with 72 chapters for each bioactive molecule of natural origin each chapter explores the natural source structure systematic name structural features compound class biological activity conventional approaches for their chemical synthesis and demerit s of conventional approaches where applicable finally critical features of total synthesis using modern sustainable techniques including reaction types synthetic strategy and synthetic route utilizing modern sustainable tools for each bioactive natural product and secondary metabolites are discussed brilliantly the spectrum of application of total synthesis of bioactive natural products using modern sustainable techniques may promote the development of more eco friendly synthetic processes so that the next generations can live on this planet with a minimum energy requirement for chemical reactions with the least pollution

this series stemmed from a group of weekly seminars in our research group aimed at keeping its members abreast of recent developments in organic synthesis the seminars tended to consist of several syntheses of natural products or related systems with particular emphasis on the general strategy inherent in the effort new and interesting reactions which were utilized in the work and specificity or the lack of it in arranging the relative stereochemistry of asymmetric centers and the

geometry of double bonds we found that natural products offered an attractive setting in which the larger science of organic chemistry could be put to crucial tests a truly elegant synthesis is a major advance in that it epitomizes how an imaginative mastery of the course of organic reactions can achieve a sophisticated objective by an economy of operations indeed any successful synthesis of a reasonably complex product however cumbersome and graceless is an important event for those who delight in the problem solving dimension of science

total synthesis of natural products is written and edited by some of today s leaders in organic chemistry eleven chapters cover a range of natural products from steroids to alkaloids each chapter contains an introduction to the natural product in question descriptions of its biological and pharmacological properties and outlines of total synthesis procedures already carried out particular emphasis is placed on novel methodologies developed by the respective authors and their research groups this text is ideal for graduate and advanced undergraduate students as well as organic chemists in academia and industry

this book is a must for every synthetic organic chemist with didactic skill and clarity k c nicolaou and e j sorensen present the most remarkable and ingenious total syntheses from the laboratories of some of the world's greatest synthetic organic chemists to make the strategies more understandable and accessible especially to the novice each total synthesis is first analyzed retrosynthetically the authors then carefully describe each step and comment on alternative methods and potential pitfalls when appropriate key chemical reactions are discussed in the wider context of the chemical literature giving the reader a lesson in both total synthesis and synthetic methods diverse structural types of natural products and important organic transformations including pericyclic ionic radical and photochemical reactions are covered catalysis asymmetric synthesis organometallic chemistry and cyclization reactions are especially highlighted mechanism reactivity selectivity and stereochemistry are presented clearly and discussed analytically numerous references to useful reviews and the original literature will make this book the first point of entry into the vast field of synthetic organic chemistry special emphasis is placed on the skillful use of graphics and schemes retrosynthetic analyses reaction sequences and crucial synthetic steps are presented in boxed blue background sections within the text for easy reference key intermediates are also shown in the margins graduate students teachers and researchers alike will find this book to be a gold mine of useful information every synthetic chemist will have a copy on his or her desk

a plethora of publications provide valuable information for the organic chemist yet the results are almost always based on successful reactions however a chemist s life is unfortunately not that easy on the contrary trial and error is still one of the most commonly used methods thus it would be useful to have access to those syntheses that do not work since they also provide important results of great importance for further synthesis this long awaited book by m a sierra and m c de la torre fills just such a gap using major total syntheses they explain the most varied problems and recommend ways out of such dilemmas problems at the start and end of a synthesis difficult and unexpected reactivities of functional groups problems due to steric properties and much more the result is a true wealth of information for any organic chemist the essential tool for successful total synthesis

classics in total synthesis ii is the long awaited sequel to classics in total synthesis a book that has made its mark as a superb tool for educating students and practitioners alike in the art of organic

synthesis since its introduction in 1996 in this highly welcomed new volume k c nicolaou and scott a snyder discuss in detail the most impressive accomplishments in natural product total synthesis during the 1990s and the first years of the 21st century while all of the features that made the first volume of classics so popular and unique as a teaching tool have been maintained in this new treatise the authors seek to present the latest techniques and advances in organic synthesis as they beautifully describe the works of some of the most renowned synthetic organic chemists of our time domino reactions cascade sequences biomimetic strategies and asymmetric catalysis are systematically developed through the chosen synthesis cutting edge synthetic technologies are discussed in terms of mechanism and scope new reactions such as olefin metathesis are presented in mini review style abundant references are given for further reading graduate students educators and researchers in the fields of synthetic and medicinal chemistry will wish to have a copy of this book in their collection as an indispensable companion that both augments and supplements the original classics in total synthesis from reviews of classics in total synthesis a volume which any chemist with an interest in synthetic organic chemistry will wish to acquire jacs this superb book will be an essential purchase for many organic chemists nature

focusing on biosynthesis this book provides readers with approaches and methodologies for modern organic synthesis by discussing major biosynthetic pathways and their chemical reactions transformations and natural products applications it links biosynthetic mechanisms and more efficient total synthesis describes four major biosynthetic pathways acetate mevalonate shikimic acid and mixed pathways and alkaloids and their related mechanisms covers reactions tactics and strategies for chemical transformations linking biosynthetic processes and total synthesis includes strategies for optimal synthetic plans and introduces a modern molecular approach to natural product synthesis and applications acts as a key reference for industry and academic readers looking to advance knowledge in classical total synthesis organic synthesis and future directions in the field

the vocabulary of organic chemistry milton orchin fred kaplan roger s macomber r marshall wilson hans w zimmeridentifies those terms and concepts which now constitute thevocabulary of organic chemists then defines and explains these terms and concepts most often using examples organized so that subject matter builds successively on increasingly varied and complex material all terms and concepts related to a particulararea are placed together except for one chapter on name and typereactions which is alphabetically arranged the only book of itskind valuable to students teachers and chemical professionalsalike 1980 protective groups in organic synthesis theodora w greene provides essential information on transformations of organic molecules including instructions and references for the protectionand regeneration of the major organic functional groups oh nh sh cooh and c o covers the best methods of formation and cleavage properties of protective groups selection of a group for aparticular need organization is by functional groups to be protected with groups arranged in order of increasing complexity of structure and with most efficient methods of formation orcleavage described first charts show the reactivities of 270 ofthe most commonly used protective groups to 108 reagents selected as prototypes for the entire array of reagents available to theorganic chemist 1981 basics of electroorganic synthesis demetriosk kyriacou a veteran organic electrochemist illuminatesfundamental ideas and principles by means of selected examples from the literature and his own research demonstrating the practical unity of the field in a clear concise manner describes thegeneral electroorganic reaction and illustrates the general mode ofconcepts and applications in the

area of electrosynthesis containsa brief survey of electroorganic reactions and coverage of specialtopics and the praxis of electroorganic synthesis 1981

If you ally infatuation such a referred **Classics In Total Synthesis** books that will have enough money you worth, acquire the certainly best seller from us currently from several preferred authors. If you desire to entertaining books, lots of novels, tale, jokes, and more fictions collections are plus launched, from best seller to one of the most current released. You may not be perplexed to enjoy all book collections Classics In Total Synthesis that we will unconditionally offer. It is not with reference to the costs. Its about what you habit currently. This Classics In Total Synthesis, as one of the most on the go sellers here will certainly be in the middle of the best options to review.

- 1. How do I know which eBook platform is the best for me?
- Finding the best eBook platform depends on your reading preferences and device compatibility.
 Research different platforms, read user reviews, and explore their features before making a choice.
- Are free eBooks of good quality? Yes, many reputable platforms offer high-quality free eBooks, including classics and public domain works. However, make sure to verify the source to ensure the eBook credibility.
- 4. Can I read eBooks without an eReader? Absolutely! Most eBook platforms offer web-based readers or mobile apps that allow you to read eBooks on your computer, tablet, or smartphone.
- 5. How do I avoid digital eye strain while reading eBooks? To prevent digital eye strain, take regular breaks, adjust the font size and background color, and ensure proper lighting while reading eBooks.
- What the advantage of interactive eBooks?
 Interactive eBooks incorporate multimedia elements, quizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience.
- Classics In Total Synthesis is one of the best book in our library for free trial. We provide copy of Classics In Total Synthesis in digital format, so the resources

- that you find are reliable. There are also many Ebooks of related with Classics In Total Synthesis.
- 8. Where to download Classics In Total Synthesis online for free? Are you looking for Classics In Total Synthesis PDF? This is definitely going to save you time and cash in something you should think about.

Hi to puskesmas.cakkeawo.desa.id, your destination for a wide assortment of Classics In Total Synthesis PDF eBooks. We are enthusiastic about making the world of literature accessible to every individual, and our platform is designed to provide you with a effortless and enjoyable for title eBook acquiring experience.

At puskesmas.cakkeawo.desa.id, our aim is simple: to democratize knowledge and promote a love for literature Classics In Total Synthesis. We are convinced that everyone should have admittance to Systems Analysis And Structure Elias M Awad eBooks, covering different genres, topics, and interests. By providing Classics In Total Synthesis and a diverse collection of PDF eBooks, we aim to strengthen readers to discover, discover, and immerse themselves in the world of written works.

In the wide realm of digital literature, uncovering Systems Analysis And Design Elias M Awad sanctuary that delivers on both content and user experience is similar to stumbling upon a secret treasure. Step into puskesmas.cakkeawo.desa.id, Classics In Total Synthesis PDF eBook acquisition haven that invites readers into a realm of literary marvels. In this Classics In Total Synthesis assessment, we will explore the intricacies of the platform, examining its features, content variety, user interface, and the overall reading experience it pledges.

At the center of puskesmas.cakkeawo.desa.id

lies a diverse collection that spans genres, meeting the voracious appetite of every reader. From classic novels that have endured the test of time to contemporary page-turners, the library throbs with vitality. The Systems Analysis And Design Elias M Awad of content is apparent, presenting a dynamic array of PDF eBooks that oscillate between profound narratives and quick literary getaways.

One of the characteristic features of Systems Analysis And Design Elias M Awad is the organization of genres, producing a symphony of reading choices. As you navigate through the Systems Analysis And Design Elias M Awad, you will encounter the complication of options — from the organized complexity of science fiction to the rhythmic simplicity of romance. This variety ensures that every reader, no matter their literary taste, finds Classics In Total Synthesis within the digital shelves.

In the realm of digital literature, burstiness is not just about diversity but also the joy of discovery. Classics In Total Synthesis excels in this interplay of discoveries. Regular updates ensure that the content landscape is ever-changing, presenting readers to new authors, genres, and perspectives. The unpredictable flow of literary treasures mirrors the burstiness that defines human expression.

An aesthetically pleasing and user-friendly interface serves as the canvas upon which Classics In Total Synthesis illustrates its literary masterpiece. The website's design is a reflection of the thoughtful curation of content, offering an experience that is both visually engaging and functionally intuitive. The bursts of color and images blend with the intricacy of literary choices, creating a seamless journey for every visitor.

The download process on Classics In Total Synthesis is a symphony of efficiency. The user is acknowledged with a direct pathway to their chosen eBook. The burstiness in the download speed ensures that the literary delight is almost instantaneous. This effortless process corresponds with the human desire for fast and uncomplicated access to the treasures held within the digital library.

A critical aspect that distinguishes puskesmas.cakkeawo.desa.id is its devotion to responsible eBook distribution. The platform vigorously adheres to copyright laws, assuring that every download Systems Analysis And Design Elias M Awad is a legal and ethical effort. This commitment brings a layer of ethical intricacy, resonating with the conscientious reader who esteems the integrity of literary creation.

puskesmas.cakkeawo.desa.id doesn't just offer Systems Analysis And Design Elias M Awad; it cultivates a community of readers. The platform supplies space for users to connect, share their literary journeys, and recommend hidden gems. This interactivity adds a burst of social connection to the reading experience, raising it beyond a solitary pursuit.

In the grand tapestry of digital literature, puskesmas.cakkeawo.desa.id stands as a dynamic thread that incorporates complexity and burstiness into the reading journey. From the nuanced dance of genres to the rapid strokes of the download process, every aspect reflects with the fluid nature of human expression. It's not just a Systems Analysis And Design Elias M Awad eBook download website; it's a digital oasis where literature thrives, and readers embark on a journey filled with enjoyable surprises.

We take pride in choosing an extensive library of Systems Analysis And Design Elias M Awad PDF eBooks, carefully chosen to cater to a broad audience. Whether you're a supporter of classic literature, contemporary fiction, or specialized non-fiction, you'll discover something that engages your imagination.

Navigating our website is a piece of cake. We've designed the user interface with you in mind, ensuring that you can easily discover Systems Analysis And Design Elias M Awad and download Systems Analysis And Design Elias M Awad eBooks. Our exploration and categorization features are easy to use, making it simple for you to find Systems Analysis And Design Elias M Awad.

puskesmas.cakkeawo.desa.id is dedicated to upholding legal and ethical standards in the world of digital literature. We emphasize the distribution of Classics In Total Synthesis that are either in the public domain, licensed for free distribution, or provided by authors and publishers with the right to share their work. We actively oppose the distribution of copyrighted material without proper authorization.

Quality: Each eBook in our assortment is carefully vetted to ensure a high standard of quality. We strive for your reading experience to be enjoyable and free of formatting issues.

Variety: We consistently update our library to bring you the newest releases, timeless classics, and hidden gems across fields. There's always a little something new to discover.

Community Engagement: We cherish our community of readers. Engage with us on social media, share your favorite reads, and participate in a growing community passionate about literature.

Whether or not you're a enthusiastic reader, a student seeking study materials, or someone exploring the realm of eBooks for the very first time, puskesmas.cakkeawo.desa.id is here to provide to Systems Analysis And Design Elias M Awad. Follow us on this literary journey, and allow the pages of our eBooks to transport you to new realms, concepts, and encounters.

We understand the excitement of discovering something fresh. That is the reason we frequently update our library, making sure you have access to Systems Analysis And Design Elias M Awad, acclaimed authors, and concealed literary treasures. With each visit, anticipate different possibilities for your reading Classics In Total Synthesis.

Gratitude for choosing puskesmas.cakkeawo.desa.id as your dependable origin for PDF eBook downloads. Delighted perusal of Systems Analysis And Design Elias M Awad