

اسلوب كتابة رسالة
الماجستير (Thesis)
او
اطروحة الدكتوراه
(Dissertation)

اعداد

الاستاذ الدكتور علاء كريم محمد

م. اسراء مزاحم رشيد

كلية الهندسة الخوارزمي

قسم الهندسة الكيميائية الاحيائية

محاوور الءورة

اليوم الاءول: الهيكل البنائي للاءطروءة Thesis structure

اليوم الثاني : ملاءظاء ارشاءية ءول اسلوب الءتابة.

اليوم الثالث : اسلوب ءتابة المصاءر References

الجزء الاول

الهيكل البنائي للاطروحة

Thesis structure

Thesis structure

الهيكل البنائي للاطروحة

يتكون الهيكل البنائي للاطروحة بصورة عامة من 22 فقرة كما مبين في ادناه:

Title (in English)	1- عنوان الاطروحة باللغة الانكليزية
Quranic verse	2- الاية القرانية
Supervisor certification	3- اقرار المشرف
Linguistic expert Certification	4- اقرار الخبير اللغوي
Examining Committee certification	5- اقرار لجنة المناقشة
Dedication	6- الاهداء
Acknowledgements	7- الت شكرات
Summary	8- الخلاصة
Contents	9- الفهرس

List of Tables	10- قائمة الجداول
List of Figures	11- قائمة الرسومات
Nomenclatures	12- قائمة التسميات
Abbreviations	13- قائمة المختصرات
Chapter one (introduction)	14- الفصل الاول (المقدمة)
Chapter Two (Literature review)	15- الفصل الثاني (استعراض المراجع)
Chapter Three (material and methods)	16- الفصل الثالث (المواد وطرائق العمل)

17- الفصل الرابع (النتائج والمناقشة)

Chapter Four (Results and Discussion)

18- الفصل الخامس (الاستنتاجات والتوصيات)

Chapter Five (Conclusions and recommendations for future work

References

19- المصادر

Appendices

20- الملاحق

Summary (Arabic)

21- الخلاصة (بالعربي)

Title(Arabic)

22- العنوان (باللغة العربية)

Republic of Iraq
Ministry of Higher Education and Scientific Research
University of Baghdad
AL-Khwarizmi College of Engineering
Department of Biochemical Engineering



**Design of Bio-pile Reactor for Bioremediation
of Petroleum Hydrocarbon
Contaminated Soil**

A thesis

Submitted to Al-khwarizmi College of Engineering University of Baghdad

*In partial fulfillment of the requirements for the degree of Master
of Science in Biochemical Engineering*

By:

Noor Mohsen Jabbar

Supervised by:

Prof. Dr. Alaa Kareem Mohammed

2018 A.D

1439 A.H

1- عنوان الرسالة

Title (English)

2- الآية القرآنية

تكتب بخط القران الكريم.

يكتب اسم السورة ورقمها.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿وَأَشْرَقَتِ الْأَرْضُ بِنُورِ رَبِّهَا وَوُضِعَ الْكِتَابُ﴾

صَدَقَ اللَّهُ الْعَلِيِّ الْعَظِيمِ

Supervisor Certification

We certify that this thesis entitled “ **Amino acid salt promoted aqueous potassium carbonate solution for carbon dioxide absorption from the gas**” presented by *Rana Esam Ahmed*, has been carried out under our supervision at the department of chemical Engineering/ University of Tikrit in partial fulfillment of the requirements of the degree of *Master of Science in Chemical Engineering*.

Signature:

Name: **Prof. Dr. Ahmed Daham Wiheeb**

In view of the available recommendation, I forward this thesis for debate by the examining Committee.

Signature:

Name: **Dr. Ahmed Hamad Abdullah**

Head of the chemical Engineering Department

Date: / / 2021

Linguistic Expert Certification

This is to certify that I have read the thesis entitled

“ Production of biodiesel from waste oil using CaO egg shell waste derived heterogeneous catalyst”

And corrected any grammatical mistakes I found. The thesis is therefore, qualified for debate.

Signature”

Name:

Date: / / 2021

Examining Committee Certification

We certify, as an examining committee, that we have read this thesis, examined the student in its content and found that the thesis meet the standard for the degree of master of Science in Biochemical Engineering.

Signature

Name: Prof. Dr. Alaa K. Mohammed

(Chairman)

Signature:

Name:

(Member)

Signature:

Name:

(Member)

Signature:

Name:

(Supervisor)

Signature:

Name:

(Supervisor)

Approved by the University of Baghdad

Signature

Name: Prof. Dr. Saba J. Nema

(Dean of College of Engineering)

Data / / 2021

5- اقرار لجنة المناقشة



Dedication

To My Family

For Their Always Care,

Encouraging and Believing in Me

To do My Best.



Acknowledgements

First, my great thanks to **ALLAH** for his mercy and blessing.

Secondly, I would like to express my sincere thanks and deep gratitude to my supervisor **Prof. Dr. Mohammed A. Atiya** for his helpful efforts, advices, interest and the trust he showed in me during my work.

Great gratitude to all the members of Al-Khwarizmi College of Engineering, especially the head of Biochemical Engineering Department, University of Baghdad Asst. **Prof. Dr. Shatha K. Mullah** , who has been very helpful for his assistance in providing the research facilities.

I would like to express my thank to **Dr. Sami D. Salman** for his valuable assistance and advices during the study.

Also, I wish to thank all my friends and colleagues for their support especially **May Muneer, Yasmin Salih**.

I am very grateful to all the people I have met along the way and have contributed to the development of my thesis.

Finally, my deep and sincere gratitude to **My Mother, my sisters (Aroa and Eman)** for their continuous help and support throughout my life and studies.

7- التـشكرات

□ يجب مراعاة التسلسل بذكر التـشكرات.

□ من هنا يبدأ الترقيم اللاتيني.

Abstract

The aim of this work is to investigate the synthesis of biodiesel from waste cooking sunflower oil (WCSO) and calcined eggshell as low-cost catalyst in a batch reactor. The eggshell was calcined in a muffle furnace at temperatures 700,750, 800, 850, and 900°C and duration 1, 2, 3, 4, and 5 hr. The chemical and physical properties of the catalyst were carried out using Fourier transforms infrared spectrophotometry (FTIR), X-ray diffraction (XRD), Emmet and Teller (BET), and Scanning Electron Microscopy (SEM) with Energy Dispersive X-Ray Analysis (EDX). The best catalyst performance (yield of biodiesel 96.11 wt. %) was obtained at 900 °C for 3 h. The BET and pore volume of the prepared catalyst were 12.5 m²/g and 0.0033 cm³/g, respectively.

8- الخلاصة

□ يذكر باختصار
موضوع البحث

□ تذكر العوامل
(المتغيرات) التي تم
دراستها

□ تذكر النتائج النهائية
التي تم الحصول
عليها

Title	Page
Acknowledgments	I
Abstract	II
Contents	III
List of tables	VI
List of figures	VII
Nomenclatures	XVI
List of Abbreviations	XVII
Chapter One: <i>Introduction</i>	1 – 7
1.1 Introduction	1
1.2 Objectives of this work	5
1.3 Scope of work	5
1.4 Thesis organization	6
Chapter Two: <i>Literature Survey</i>	8–34
2.1 Introduction	8
2.2 Biodiesel	9
2.2.1 Biodiesel production technologies	12
2.2.1.1 Direct use and raw oils blending	12
2.2.1.2 Thermal cracking (pyrolysis)	12
2.2.1.3 Micro-emulsions process	13
2.2.1.4 Transesterification (Alcoholysis)	13
2.3 Biodiesel feedstock	14
2.3.1 Waste vegetable oil	16
2.3.2 Virgin oil	17
2.3.3 Animal fats	18
2.3.4 Algal oil	18
2.3.5 Alcohol	19
2.4 Catalysts in transesterification process	19
2.4.1 Homogeneous acid and base catalysts	20

9- الفهرس

يكون بشكل جدول يشمل:-

□ رقم الفصل
والارقام الفرعية

□ اسم الموضوع

□ رقم الصفحة

List of Tables

Table No.	Title	Page
Table (2.1)	Genera of Petroleum hydrocarbon- utilizing bacteria	11
Table (2.2)	Environmental conditions affecting biodegradation	14
Table (3.1)	List of chemical materials	25
Table (3.2)	List of equipments	26
Table (3.3)	Specification of Diesel according to" Guide of marketing specifications for Iraqi petroleum products"	28
Table (4.1)	Morphological characteristics, gram stain and biochemical tests	39
Table (4.2)	Identified bacteria using Vitek 2 system	41
Table (4.3)	Surface tension reduction by hydrocarbon degrading bacterial isolates	42
Table (4.4)	Cell biomass quantities	44
Table (4.5)	Physical and chemical properties of the used soil	62
Table (4.6)	Bioremediation of a soil contaminated with diesel during 35 days	64
Table (4.7)	pH, moisture content, and temperature of amended soil	68
Table (4.8)	pH, moisture content, and temperature of unamended soil	68

10- قائمة الجداول

وتضم :-

□ رقم الجدول. (لاحظ ان رقم الجدول يتكون من جزئين : الرقم الاول يشير الى رقم الفصل والثاني الى تسلسل الجدول ضمن الفصل الواحد)

□ عنوان الجدول

□ رقم الصفحة

List of Figures

Figure No.	Title	Page
Figure (2.1)	Typical diagram of Bio piles setup for soil bioremediation	9
Figure (2.2)	Oil refining process starts with a fractional distillation column	12
Figure (2.3)	Chemical structures of alkanes, alkenes, and aromatic hydrocarbons	20
Figure (2.4)	Degradation of aliphatic hydrocarbon	21
Figure (2.5)	Degradation of typical aromatic hydrocarbon	22
Figure (2.6)	Biological surfactant micellization	24
Figure (3.1)	Soil contaminated with diesel	28
Figure (3.2)	The pilot-scale stainless steel tanks of Bio pile system	35
Figure (3.3)	The dimensions of the stainless steel Bio pile system	36
Figure (3.4)	Digital thermometer and soil moisture probe	37
Figure (4.1)	Colonies morphology and photomicrograph of isolated bacterial culture on nutrient agar, NA-1: <i>Enterobacter cloacae</i> , NA-2: <i>Staphylococcus aureus</i> , NA-3: <i>Sphingomonas paucimobilis</i> , NA-4: <i>Pentaoe species</i>	40
Figure (4.2)	Biodegradation rate at concentration 0.7 % of diesel by individual bacterial isolates and mixed culture after 28 days	46

11- قائمة الاشكال

وتضم :-

□ رقم الشكل. (لاحظ ان رقم الشكل يتكون من جزئين : الرقم الاول يشير الى رقم الفصل والثاني الى تسلسل الشكل ضمن الفصل الواحد)

□ عنوان الشكل

□ رقم الصفحة

Nomenclatures

Symbol	Discretion	Unit
ΣA	Total peak area of the methyl ester in C_{14} to that in $C_{24:1}$	
$A_{C_{21}}$	Peak corresponding to methyl heptadecanoate	
B	The HCl required by Blank	ml
C	The standard concentration of potassium hydroxide solution	mole/l
C	Carbon atoms	
$C_{C_{21}}$	Concentration of the methyl heptadecanoate	mg/ml
D	Double bond	
M	Mass of the sample	mg
R	Hydrocarbon group	
S	The HCl required by sample	ml
V	Standard volume of potassium hydroxide solution	ml
$V_{C_{21}}$	Volume of the methyl heptadecanoate	ml
W_1	Weight of empty pycnometer	g
W_2	Weight of pycnometer with water	g
W_3	Weight of pycnometer filled oil.	g
θ	Bragg angle	

12- التسميات

وتضم :-

الرمز

وصف الرمز

الوحدات (ان وجدت)

List of Abbreviations

<i>Abbreviation</i>	<i>Description</i>
BHM	Bushnell Haas Medium
C:N	Carbon to nitrogen
CFU	Colony forming units
DNAPLs	Denser non-aqueous phase liquids
FT-IR	Fourier Transform Infrared Spectroscopy
GC	Gas Chromatography
LNAPLs	lighter non-aqueous phase liquids
NAPLs	Non-aqueous phase liquids
NPK	Nitrogen, phosphorus and potassium
PAHs	Polycyclic Aromatic Hydrocarbons
rpm	Revolutions per minute
TPHs	Total petroleum hydrocarbons
USEPA	United States Environmental Protection Agency

13- قائمة المختصرات

وتضم :-

□ المختصر

□ وصف المختصر

CHAPTER ONE INTRODUCTION

1.1 Introduction

In the light crises of depletion, petroleum fuel and high petroleum fuel price, there is a strong need to reduce the world's reliance on fossil fuels and replace it with other more sustainable energy sources such as geothermal energy, solar energy, tidal energy, wind energy, and biofuel (Marinković *et al.*, 2016; Nurdin *et al.*, 2017).

The energy crisis of the 1970s led to vigorous investigations pertaining to the use of biodiesel as an alternative fuel. Biodiesel is a promising alternative to diesel fuel produced from crude oil due to its environmentally friendly properties such as non-toxicity; no sulfur content and a very renewable nature (Amani *et al.*, 2016). Depending on these features, the renewable energy during incoming years and producing the same quantities of the energy from crude oil is shown in Figure (1.1).

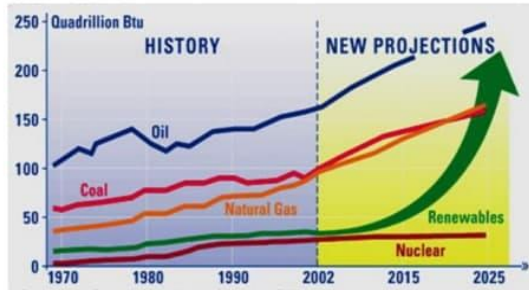


Figure (1.1): The increase of renewable energy to 2025 (Ngoya, 2015)

14- المقدمة

تشمل المقدمة الآتي:-

❖ التعريف بموضوع البحث

❖ أهمية الموضوع

❖ أهداف الدراسة والبحث

❖ لاحظ بدا من المقدمة يبدأ الترقيم الانكليزي

Chapter two Literature survey

2.1 Basic Information about Bioremediation

2.1.1 Bioremediation

Bioremediation means the use of living organisms to solve an environmental problem such as contaminated soil or contaminated water. it's a technique to remove contaminants from the environment and thus restore the original natural environment also prevent more pollution (Basharudin, 2008). The addition of active microbes increases the number of microorganisms and thereby accelerates the bioremediation process. Effective microbes can be found in oil-contaminated soils (Zeron, 2012). Microorganisms in bioremediation processes used the contaminants as nutrients and energy sources (Kumar *et al.*, 2011).

2.1.2 Bioremediation techniques

Bioremediation techniques fall into two categories, bioaugmentation and biostimulation:

2.1.2.1 Bioaugmentation

It's the addition of particular microorganisms that have ability to degrade the compounds at the polluted site. The hydrocarbon-degrading organisms were collected from different sites, they are adapted to withstand various environmental conditions like variable temperature and pH change in addition to the good ability to utilize nutrients available such as nitrogen, phosphorus, and oxygen so they can clean the contaminated site quickly (Kumar and Gopal, 2015). The increased efficiency of a treatment system is due to an increased density of microbial cells that

15-استعراض المراجع

ويشمل استعراض
الدراسات السابقة
وكذلك المراجع التي
تتناول مواضيع قريبة
من موضوع البحث

Chapter Three Materials and Methods

3. Materials and methods

3.1 Materials

3.1.1 Chemicals:

Table (3.1) illustrates the chemical materials that used in this study and their suppliers.

Table (3.1) List of chemical materials

Chemicals	Company	Country
Agar-Agar	Fluka	Swaziland
CaCl ₂ .2H ₂ O	LTD	India
CCL ₄	E. Merck	Darmstadt
Chloroform	TeTenal photowerk	Berlin
Dichloromethane	BIOSOLVE	France
Diesel	Al-Dura oil refinery	Baghdad -Iraq
Ethanol	Scharlau	Spain
FeCl ₃	BDH	England
Hydrochloric acid	LTD	India
K ₂ HPO ₄ , KH ₂ PO ₄ , MgSO ₄ .7H ₂ O	Fluka	Swaziland
NH ₄ NO ₃	REACHIM	USSR
Nutrient agar	HiMedia	India
Nutrient broth	OXOID	England
Sodium sulphates anhydrous	Merck	Germany
Sulfuric acid	HIMEDIA	India

16- الفصل الثالث المواد وطرائق العمل

يشمل هذا الفصل الاتي:-

❖ المواد التي استخدمت في
البحث

❖ الاجهزة التي استخدمت في
البحث

❖ وصف الجهاز او المنظومة
العملية

❖ طريقة العمل

❖ اجهزة القياس

❖ الفحوصات

Chapter four

Results and Discussion

4.1 Isolation and Identification of Diesel-Utilizing Bacteria

Bacterial strains capable of decomposing diesel were isolated using Bushnell-Haas medium to differentiate between hydrocarbons degrading bacteria and non-degraded bacteria. Four different strains were isolated from the contaminated soil, which was designated as NA- 1, NA- 2, NA- 3, and NA- 4. The biochemical tests were conducted on these strains and table (4.1) shows these characteristics.

Table (4.1) Morphological characteristics, gram stain and biochemical tests

Characteristics	bacterial colonies			
	NA- 1	NA- 2	NA- 3	NA- 4
Color of the colony	creamy	golden yellow	off-white	pale yellow
Shape of the cell	rod	round	rod	rod
Gram's Staining	-	+	-	-
Motility	motile	non-motile	motile	motile
Spore-forming	-	-	-	-
Catalase test	+	+	+	+
Oxidase test	-	-	+	-
Urease production test	+	+	-	-

(+) = positive result. (-) = negative result.

17- الفصل الرابع النتائج والمناقشة

وتشمل

□ عرض النتائج التي تم الحصول عليها

□ مناقشة النتائج ووضع التفسير لها.

□ مقارنة النتائج مع نتائج الدراسات السابقة

Chapter five

Conclusions and recommendations for future work

5.1 Conclusions

The following are the conclusions of this study:

1. Three strains of gram-negative bacteria were isolated from diesel-contaminated soil which were *Sphingomonas paucimobilis*, *Pentaoas species*, *Enterobacter cloacae*, and one strain of Gram-positive bacteria as *Staphylococcus aureus*.
2. The metabolic activity of isolated bacteria showed a good level of biodegradability at different concentrations of diesel when used individually. They also demonstrated the best biodegradability when used together in a mixed culture which reached 88.4%.
3. The addition of nutrients to the soil contaminated with diesel stimulated the microbial population and showed an increase in degradation rates, especially during the early stages of degradation.
4. An overall 75 % of the total petroleum hydrocarbons (TPH₁) were removed from the amended soil and 33 % of the control soil at the end of study period.
5. An *ex-situ* bioremediation (bio piles) of diesel polluted soil performed under aerobic conditions has shown to be an effective remediation method for hydrocarbons contaminated soils.

18-الفصل الخامس

الاستنتاج والتوصيات للدراصة المستقبلية

يضم هذا الفصل:-

❖ اهم النتائج التي تم الحصول عليها

❖ اهم الملاحظات التي تم الخروج بها من الدراصة

❖ المقترحات للدراصة المستقبلية

A

- Abalos A., Vinas M., Sabate J., Manresa M. A., and Solanas A. M. (2004). "Enhanced Biodegradation of Casablanca Crude Oil by a Microbial Consortium in Presence of a Rhamnolipid Produced by *Pseudomonas Aeruginosa* AT10". *Biodegradation*, 15 (4), pp.249–60.
- Abbas O., Rebufa C. , Dupuy N. , Permanyer A., and Kister J. (2008). "Assessing Petroleum Oils Biodegradation by Chemometric Analysis of Spectroscopic Data". *Talanta* , 75 (4), pp.857–71.
- Abd Burghal A.(2015). "Biodegradation and bioremediation of petroleum hydrocarbons by *Streptomyces* and *Nocardiosis* strains isolated from oil contaminated soil of Basrah Governorate-Iraq". Ph.D., Thesis. College of Science.University of Basrah, pp.142.
- Adebusoye S. A., Ilori M. O., Amund O. O., Teniola O. D., and Olatope S. O. (2007). "Microbial Degradation of Petroleum Hydrocarbons in a Polluted Tropical Stream". *World Journal of Microbiology and Biotechnology*, 23 (8), pp.1149–59.
- Adesodun J. K., and Mbagwu J. S. (2008). "Biodegradation of Waste-Lubricating Petroleum Oil in a Tropical Alfisol as Mediated by Animal Droppings". *Bioresource Technology* , 99 (13), pp. 59–65.
- Afzal M., Sessitsch A., Yousaf S., and Reichenauer T. G. (2012). "The Inoculation Method Affects Colonization and Performance of Bacterial Inoculant Strains in the Phytoremediation of Soil Contaminated with Diesel Oil". *International Journal of Phytoremediation*, 14, pp. 37–41.

References المصادر 19

20- الملاحق

APPENDICES
(A - B)

Appendix (A)

Figure (A.1) Laboratory report of bacterial isolates identification by VITEK 2 system (*Enterobacter cloacae*)

Al Nozha medical laboratory																																																															
bioMérieux Customer: ANAS	Laboratory Report		Printed: Jul 24, 2017 20:07 CDT Printed by: LabAdmin																																																												
System #:																																																															
Isolate: Meer Na1-1 (Approved)			Bench: other																																																												
Card Type: GN Bar Code: 2418100163502079	Testing Instrument: 080140ED456 (12384)																																																														
Backup Technology: Laboratory Address: LabAdmin																																																															
BioNumber: 0625634153552018	Selected Organism: <i>Enterobacter cloacae</i> complex																																																														
Organism Quantity:																																																															
Comments:																																																															
<table border="1"> <tr> <td>Identification Information</td> <td>Card: DN</td> <td>Lot Number: 2418100103</td> <td>Expires: Mar 5, 2018 12:00 CST</td> </tr> <tr> <td></td> <td>Completed: Jul 19, 2017 23:21 CDT</td> <td>Status: Final</td> <td>Analysis Time: 4:55 Hours</td> </tr> <tr> <td>Organism Origin</td> <td colspan="3">WTDH2</td> </tr> <tr> <td>Selected Organism</td> <td colspan="3">99% Probability <i>Enterobacter cloacae</i> complex</td> </tr> <tr> <td></td> <td>BioNumber: 0625634153552018</td> <td colspan="2">Confidence: Excellent identification</td> </tr> <tr> <td>ERP Organism:</td> <td colspan="3"></td> </tr> <tr> <td colspan="4">Analysis Organisms and Tests to Separate:</td> </tr> <tr> <td colspan="4">Enterobacter cloacae complex</td> </tr> <tr> <td>Enterobacter kobei</td> <td colspan="3">UREASE(83),LACTOSE(86),MGB(82),dSORBITOL(94)</td> </tr> <tr> <td>Enterobacter hormaechei</td> <td colspan="3">UREASE(87),MGB(82),dSORBITOL(91)</td> </tr> <tr> <td>Enterobacter cloacae esp. cloacae</td> <td colspan="3">UREASE(160),LACTOSE(86),MGB(86),dSORBITOL(90)</td> </tr> <tr> <td>Enterobacter cloacae esp. dissolvens</td> <td colspan="3">UREASE(180),MGB(82),dSORBITOL(90)</td> </tr> <tr> <td>Enterobacter faecalis</td> <td colspan="3">UREASE(83),LACTOSE(86),MGB(82),dSORBITOL(90)</td> </tr> <tr> <td colspan="4">Analysis Message:</td> </tr> <tr> <td colspan="4">Continued using Typical Map pattern(s)</td> </tr> </table>				Identification Information	Card: DN	Lot Number: 2418100103	Expires: Mar 5, 2018 12:00 CST		Completed: Jul 19, 2017 23:21 CDT	Status: Final	Analysis Time: 4:55 Hours	Organism Origin	WTDH2			Selected Organism	99% Probability <i>Enterobacter cloacae</i> complex				BioNumber: 0625634153552018	Confidence: Excellent identification		ERP Organism:				Analysis Organisms and Tests to Separate:				Enterobacter cloacae complex				Enterobacter kobei	UREASE(83),LACTOSE(86),MGB(82),dSORBITOL(94)			Enterobacter hormaechei	UREASE(87),MGB(82),dSORBITOL(91)			Enterobacter cloacae esp. cloacae	UREASE(160),LACTOSE(86),MGB(86),dSORBITOL(90)			Enterobacter cloacae esp. dissolvens	UREASE(180),MGB(82),dSORBITOL(90)			Enterobacter faecalis	UREASE(83),LACTOSE(86),MGB(82),dSORBITOL(90)			Analysis Message:				Continued using Typical Map pattern(s)			
Identification Information	Card: DN	Lot Number: 2418100103	Expires: Mar 5, 2018 12:00 CST																																																												
	Completed: Jul 19, 2017 23:21 CDT	Status: Final	Analysis Time: 4:55 Hours																																																												
Organism Origin	WTDH2																																																														
Selected Organism	99% Probability <i>Enterobacter cloacae</i> complex																																																														
	BioNumber: 0625634153552018	Confidence: Excellent identification																																																													
ERP Organism:																																																															
Analysis Organisms and Tests to Separate:																																																															
Enterobacter cloacae complex																																																															
Enterobacter kobei	UREASE(83),LACTOSE(86),MGB(82),dSORBITOL(94)																																																														
Enterobacter hormaechei	UREASE(87),MGB(82),dSORBITOL(91)																																																														
Enterobacter cloacae esp. cloacae	UREASE(160),LACTOSE(86),MGB(86),dSORBITOL(90)																																																														
Enterobacter cloacae esp. dissolvens	UREASE(180),MGB(82),dSORBITOL(90)																																																														
Enterobacter faecalis	UREASE(83),LACTOSE(86),MGB(82),dSORBITOL(90)																																																														
Analysis Message:																																																															
Continued using Typical Map pattern(s)																																																															
<p>Installed VITEK 2 System Version: 08.01 IIG Interpretation Guidelines ACS Parameter Set Name:</p> <p>Therapeutic Interpretation Guidelines ACS Parameter List Modified:</p>																																																															
Page 1 of 2																																																															

لاحظ انه للملاحق
ترقيم خاص بها

Appendix (B)

B.1 FT-IR Spectrum at concentrations 0.7 % and 3 % (v/v) of diesel by each single isolates after 7days of incubation, from figure (B.1) to figure (B.8).

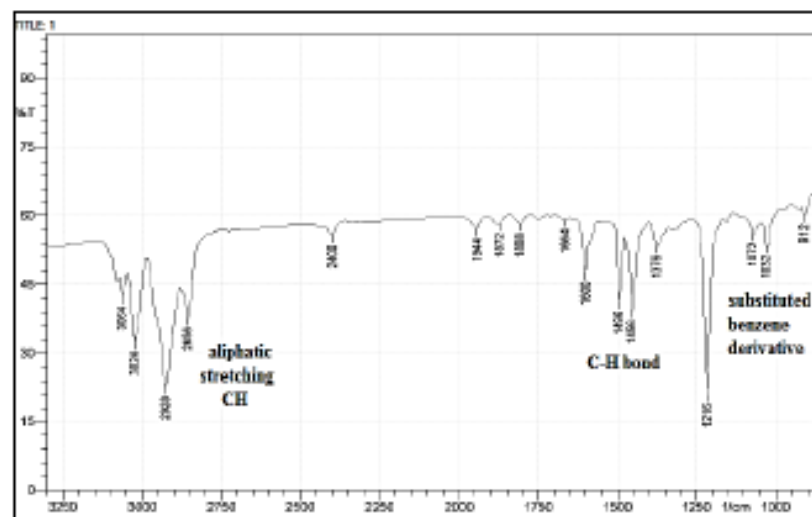


Figure (B.1) FT-IR spectrum of diesel at concentration 0.7% treated by *E. cloacae* after 7 days

الخلاصة

ركزت هذه الدراسة على معالجة التربة الملوثة بالمركبات النفطية (الديزل) و التي تسببت في مشاكل بيئية خطيرة. تم عزل أربعة سلالات بكتيرية من عينات التربة الملوثة بالديزل. العزلات التي تم تشخيصها بواسطة نظام Vitek 2، هي كل من *Staphylococcus aureus*، *Enterobacter cloacae* و *Sphingomonas paucimobilis* و *Pentocae species*. وقد تم التحقق من الأنشطة البيولوجية وقدرات التحلل البيولوجي لكل عزلة بشكل منفرد و للخليط البكتيري في وسط Bushnell-Haas medium مُزود بتراكيز مختلفة من الديزل (0.7, 1, 3%) (v/v) كمصدر وحيد للكربون والطاقة.

تم اجراء اختبار قابلية إنتاج المستطيات الحيوية باستخدام Sigma 703D stand-alone tensiometer وأظهر الاختبار أن هذه العزلات هي من منتجي المستطيات الحيوية. أفضل النتائج لاختبار انخفاض الشد السطحي تم تحصيلها عند استخدام الخليط البكتيري حيث اظهرت النتائج ان المستطيات الحيوية المُنتجة من قبل الخليط البكتيري قامت بخفض الشد السطحي للوسط من ٦٦ (ملي نيوتن/متر) الى ٣٨,٧٥ و ٣٣,٨٩ و ٣٥,١٥ (ملي نيوتن/متر) وفقاً لتراكيز الديزل (٠,٧، ١ و ٣%) على التوالي.

بعد ٢٨ يوماً من الحضارة عند درجة حرارة ٣٠ درجة مئوية، فُان معدل التحلل الحيوي من قبل الخليط البكتيري عند التراكيز ٠,٧ و ٣% (v/v) وصل الى ٧٩,٣% و ٧٠,٣١% على التوالي. في حين أظهر الخليط البكتيري قدرة ممتازة على التحلل الحيوي عند تركيز ١% (v/v) من الديزل حيث وصلت إلى ٨٨,٤%. كما أظهرت السلالات الفردية نفس الأداء عند التركيز ١% (v/v) من الديزل على النحو التالي: ٨٥,١% من قبل *S. paucimobilis*، ٨٤% من قبل *Pentocae sp.*، ٧٩% من قبل *S. aureus* و ٧٤% من قبل *E. cloacae*. وبالتالي، أظهرت النتائج أن هذه البكتيريا المعزولة فعالة في التحلل البيولوجي للديزل عند استخدامها بشكل منفصل و عند استخدامها كخليط بكتيري.

21- الخلاصة بالعربي

يجب ان تطابق
الخلاصة بالانكليزي



جمهورية العراق
وزارة التعليم العالي والبحث العلمي
جامعة بغداد
كلية الهندسة الخوارزمي
قسم الهندسة الكيميائية الأحيائية

12- العنوان باللغة العربية

تصميم منظومة Bio-pile لمعالجة التربة الملوثة بالمركبات الهيدروكربونية

رسالة

مقدمة لقسم الهندسة الكيميائية الأحيائية / كلية الهندسة الخوارزمي - جامعة بغداد
كأحد المتطلبات لنيل شهادة الماجستير
في علوم الهندسة الكيميائية الأحيائية

أعداد :

نور محسن جبار

بإشراف

أ.د. علاء كريم محمد

اليوم الثاني

ملاحظات ارشادية حول اسلوب الكتابة

ملاحظات ارشادية حول اسلوب الكتابة

اولا : تجنب استخدام الجملة الطويلة.

Example

Biodiesel has many main advantages over conventional diesel fuel, it contains a higher Cetane number, no aromatics and considered oxygenated fuel making it a clean burning fuel and producing less unburned hydrocarbons (HC), particulate matter (PM), and carbon monoxide (CO) compared with the conventional diesel fuel (Ribeiro *et al.*, 2011)

Alternative

Biodiesel has many main advantages over conventional diesel fuel. It is regarded as a clean burning fuel since it has a higher Cetane number and contains no aromatics as well as considered as oxygenated fuel. As comparing with the conventional diesel fuel, biodiesel producing less unburned hydrocarbons, carbon monoxide (CO) and particulate matter (PM) (Ribeiro *et al.*, 2011).

ثانياً: كلمة Figure

- 1- بالامكان اختصار كلمة (Figure) الى (Fig.)
- مثلاً تكتب كلمة (Figure 2.1) ويمكن اختصارها الى كلمة (Fig.2.1)
- 2- اذا وردت كلمة (Figure) في بداية الجملة تكتب كاملة ولا تختصر.
- 3- تبدأ كلمة (Figure) بحرف كبير (capital letter) اينما وردت

Example.

Figure (4.22) shows the FAME yield after 3hr reaction as a function of the calcination temperature. As proof of the results, the temperature of calcination is a major factor influencing the performance of the catalyst. From **Fig.** (4.22), it can be seen that the FAME content increased from 2.2 wt% to 78.535 wt% as the temperature of calcination has changed from 700 °C to 900 °C for a calcined catalyst sample for 3hr.

3- عنوان الشكل (Title) يكتب اسفل الرسم وليس فوق الرسم

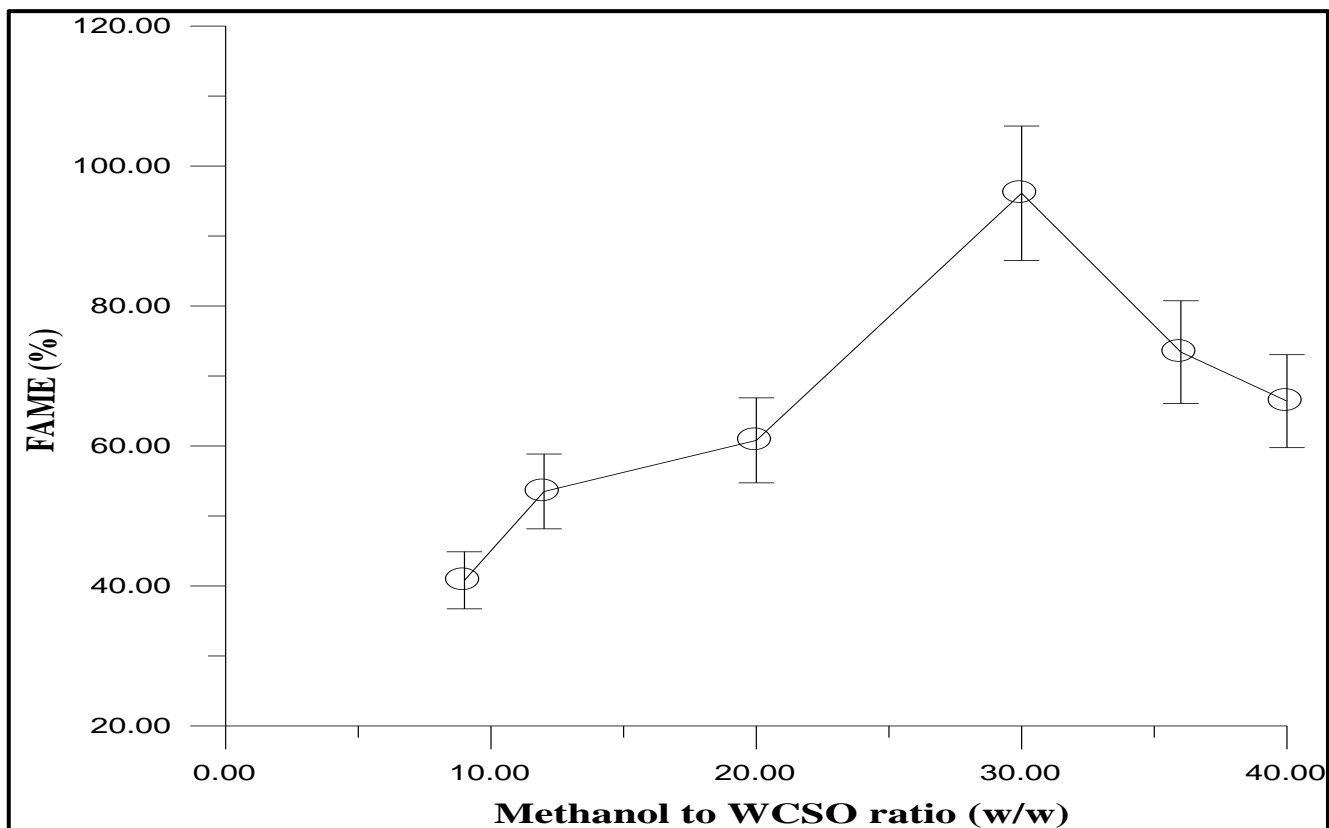


Figure (4.24): Effect of oil/methanol molar ratio on FAME content (experimental conditions: 65°C; 5 wt. % catalyst loading; 3hr)

Table (4.1): Free fatty acid, acid value, viscosity, density, and Saponification value of treated waste cooking sunflower oil

Concentration	Waste cooking oil after pretreatment
Free fatty acid %	0.901
Acid value (mg KOH/g of oil)	1.7
Viscosity at 40°C (cp)	38.7
Density at 25°C (kg/m ³)	910
Saponification value	187.935

رابعاً : الاشارة الى المصدر في المتن

1- يشار الى المصدر بالشكل التالي (Robert , 2013)

➤ Water consists of oxygen and hydrogen (Ellen, 1940).

2- اذا وجد باحثين في المصدر يكتب بالشكل التالي (Robert and Hadi , 2013)

3- اذا وجد ثلاث باحثين او اكثر في المصدر فيكتب بالشكل التالي (Robert *et al.* , 2013)

4- في حالة الاشارة الى اكثر من مصدر بنفس الوقت فيكتب بالشكل التالي

(Buasri *et al.*, 2013; Taufiq and Huda., 2015)

5- اذا اشير الى الباحث كفاعل أو مفعول به او ضمير فيكتب بالشكل التالي

Lee *et al.* (2011) observed the BET surface area of 9 m²/g for CaO catalyst obtained under similar calcination condition of 800 °C

It was found that calcined samples for the above mentioned temperatures were not enough to convert the eggshell to CaO catalyst as noted by Ekeoma (2017).

Punctuation Marks

علامات الترقيم

There are many punctuation marks. The most frequently used of these marks will be covered here, such as full stop(.), comma(,), colon (:), and semicolon(;).

1- Full stop (.)

تستخدم في نهاية الجملة

- Water consists of oxygen and hydrogen.
- The first step of treatment is to remove the settleable and dissolved solids suspended in the water.
- Biodiesel has many main advantages over conventional diesel fuel. It is regarded as a clean burning fuel ✓
- Biodiesel has many main advantages over conventional diesel fuel. It is regarded as a clean burning fuel ✗

2- Comma (,)

- تستخدم في عطف الجمل

- This process is only the first step, and it has mainly removed larger particles in the water, but some smaller particles may still remain, as well as chemicals and bacteria.
- Sand filters can be set up in two ways, either the water flows in from the bottom and exits the top, or the water flows in from the top and exits the bottom.

- تستخدم عند فصل اجزاء القائمة

- There are many methods for treatment such as chemical, physical, thermal, and biochemical.
- This electrolysis is conducted in either a mercury cell, a diaphragm cell, or a membrane cell.
- The method is cheap, clear, easy, and well known.
- The method is cheap, clear, easy, and well known. ✘
- The method is cheap, clear, easy, and well known. ✘

- تستخدم في الجمل الاعتراضية

- Chemicals, namely organic solvents, can be used for this purpose.
- The used method, settling, is more efficient.

3- Colon (:)

- تستخدم قبل التعداد في الجملة

- Glucose consists of three elements: carbon, oxygen, and hydrogen.
- There are three ways signals transmission: electrical, pneumatic, and hydraulic.
- there are two types of electric charges, positive charges and negative charges



3- Semicolon (;)

الفاصلة المنقوطة

- تستخدم عندما تكون هنالك جملتين منفصلتين ولكنهما مرتبطتين بشكل قوي في المعنى. اي عندما تشرح الجملة التالية الجملة السابقة. في الحقيقة الفاصلة المنقوطة تكون قوتها مابين النقطة (.) والفاصلة (,). فائدتها الوقوف عليها عند القراءة .

- Using this method is very dangerous; it releases toxic gases and leaves solid deposits harmful to human health.
- The method is desirable **because** its efficiency is high and its cost is low. ✓
- The method is desirable **since** its efficiency is high and its cost is low. ✓
- The method is desirable. Its efficiency is high and its cost is low. محيرة ومربكة
- The method is desirable; its efficiency is high and its cost is low. ✓ الارصن لغويا

اسلوب استخدام بعض كلمات ربط الجمل

Furthermore

بالإضافة الى

- This technique is very efficient. **Furthermore**, it is easy to carry out.
- This technique is very efficient, **furthermore**, it is easy to carry out.
- This technique is very efficient; **furthermore**, it is easy to carry out.
- This technique is very efficient.furthermore it is easy to carry out. x

Moreover

وعلاوة على ذلك

The rent is reasonable, and **moreover**, the location is perfect.

The rent is reasonable. **Moreover**, the location is perfect.

The rent is reasonable. The location is, **moreover**, perfect.

The rent is reasonable moreover the location is perfect. **x**

Therefore

و عليه

- The solvent is not organic, and **therefore** can not be used in the experiment.
- The solvent is not organic, **therefore** can not be used in the experiment.
- The solvent is not organic. **Therefore**, it can not be used in the experiment.
- The solvent is not organic. It **therefore** can not be used in the experiment.
- The solvent is not organic **therefore** can not be used in the experiment. ✘

However

ومع ذلك

- تستخدم في بداية الجملة الثانية

- The engineers said the bridge was now safe, **however**, no one wanted to risk crossing it.
- The engineers said the bridge was now safe. **However**, no one wanted to risk crossing it.
- The engineers said the bridge was now safe. No one, **however**, wanted to risk crossing it.

Exercise 1

Correct the following sentences:

- Fructose consists of three elements, carbone and oxygen and hydrogen
- In the Mannheim process sodium chloride is used for the production of sodium sulphate, hydrochloric acid.
- Sodium chloride is heavily used so even relatively minor applications can consume massive quantities
- there are Two types of electric charges, positive charges and negative charges
- It works like magnets and in fact electricity creates a magnetic field in which similar charges repel each other and opposite charges attract.
- All the matter in the universe is made of tiny particles with positive and negative or neutral charges

Solution of exercise 1

- Fructose consists of three elements: carbon, oxygen, and hydrogen.
- In the Mannheim process, sodium chloride is used for the production of sodium sulphate **and** hydrochloric acid.
- Sodium chloride is heavily used, so even relatively minor applications can consume massive quantities.
- **T**here are Two types of electric charges: positive charges and negative charges.
- It works like magnets, and in fact, electricity creates a magnetic field, in which similar charges repel each other and opposite charges attract.
- All the matter in the universe is made of tiny particles with positive, negative or neutral charges.

Exercise 2

Water is an inorganic, transparent and tasteless, odorless, and nearly colorless chemical substance: which is the main constituent of Earth's hydrosphere. water is so important : it represents the fluids of most living organisms furthermore it is vital For all known forms of life. Its chemical formula is H_2O . Water consists of two elements, oxygen and hydrogen, which connected by covalent bonds. Water is the name of the liquid state of H_2O at standard ambient temperature, Pressure. It forms precipitation in the form of rain and aerosols in the form of fog. clouds are formed from suspended droplets of water and ice, its solid state. When finely divided, crystalline ice may precipitate in the form of snow. The gaseous state of water is steam or water vapor. Water moves continually through the water cycle of evaporation, transpiration, condensation, precipitation, and runoff, which usually reaching the sea

Solution of exercise 2

Water is an inorganic, transparent, tasteless, odorless, and nearly colorless chemical substance, which is the main constituent of Earth's hydrosphere. Water is so important ; it represents the fluids of most living organisms, furthermore, it is vital for all known forms of life. Its chemical formula is H_2O . Water consists of two elements: oxygen and hydrogen, which connected by covalent bonds. Water is the name of the liquid state of H_2O at standard ambient temperature and pressure. It forms precipitation in the form of rain and aerosols in the form of fog. Clouds are formed from suspended droplets of water and ice, its solid state. When finely divided, crystalline ice may precipitate in the form of snow. The gaseous state of water is steam or water vapor. Water moves continually through the water cycle of evaporation, transpiration, condensation, precipitation, and runoff, which usually reaching the sea.

Plagiarism (الانتحال)

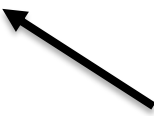
يعرف الانتحال على انه ((تقديم الباحث عبارات او جمل او افكار او عمل تعود لشخص اخر، وتقديمه على انه عمل خاص به اي دون الاشارة الى مصدره الاصلي. ويعد الانتحال بهذه الطريقة سرقة علمية وهو عمل خاطئ سواء كان متعمدا او غير متعمد.

كيف نقل او نتخلص من الاستلال

ان افضل اسلوب لتقليل الاستلال او التخلص منه هو اعادة صياغة ما ذكره المؤلف الاصلي بشكل جديد تماما ، بمعنى ان يقوم الباحث بقراءة فقرة ما ثم يعبر عن فهمه لتلك الفكرة باسلوب اخر على ان لا تفقد الفكرة الاصلية من معناها الحقيقي، ومع ذلك يجب على الباحث توثيق المصدر الاصلي والا يعتبر ذلك انتحالا علميا.

Example

The most important function of hydrogen in the human body is to keep you hydrated. Water is made up of hydrogen and oxygen and is absorbed by the cells of the body. Therefore, it is a crucial element which is used not in our body but also as a fuel, in military weapons etc.



نسبة الاستتال 100%

Hydrogen has an essential function in keeping the human body hydrated. Cells of our bodies absorb water which made up of oxygen and hydrogen. So, hydrogen is regarded as an essential element needed by our bodies. Moreover, it is used in many fields such as fuel, military weapons, etc.



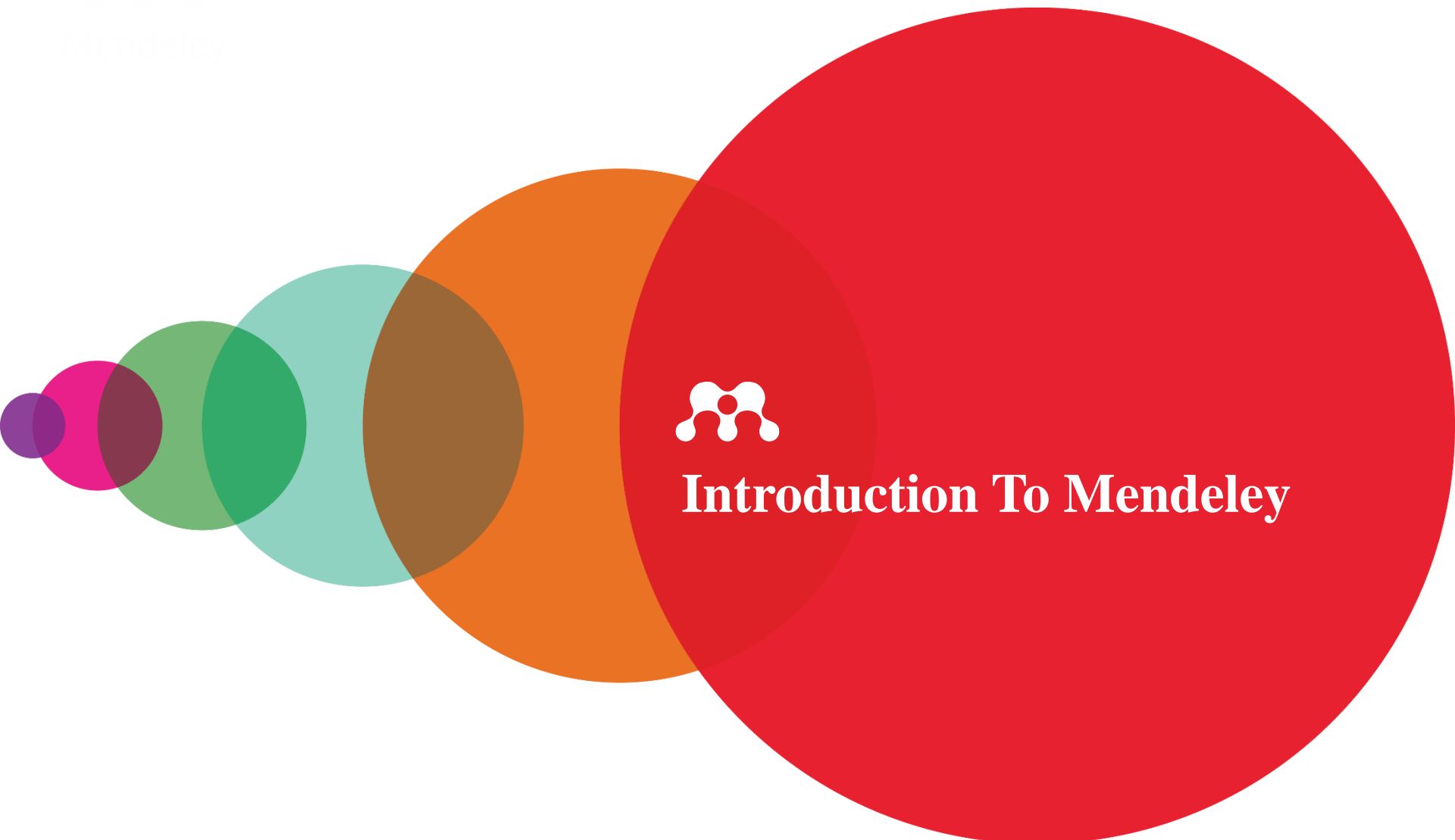
نسبة الاستتال 0%

اليوم الثالث

المصادر العلمية وكيفية الاشارة اليها

باستخدام برنامج

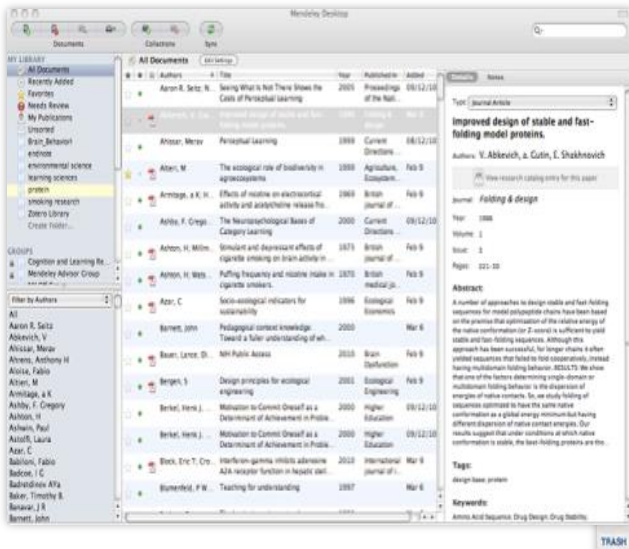
MENDELEY



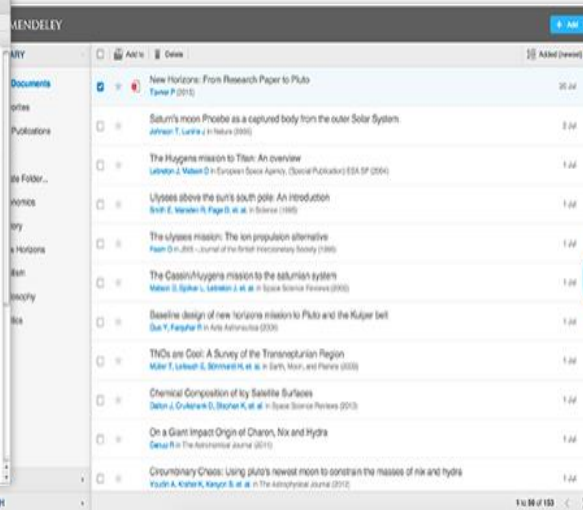
Introduction To Mendeley

So what is Mendeley?

• ***Mendeley*** is a reference manager and academic social network that can help you organize your research, collaborate with others online, and discover the latest research.



Desktop

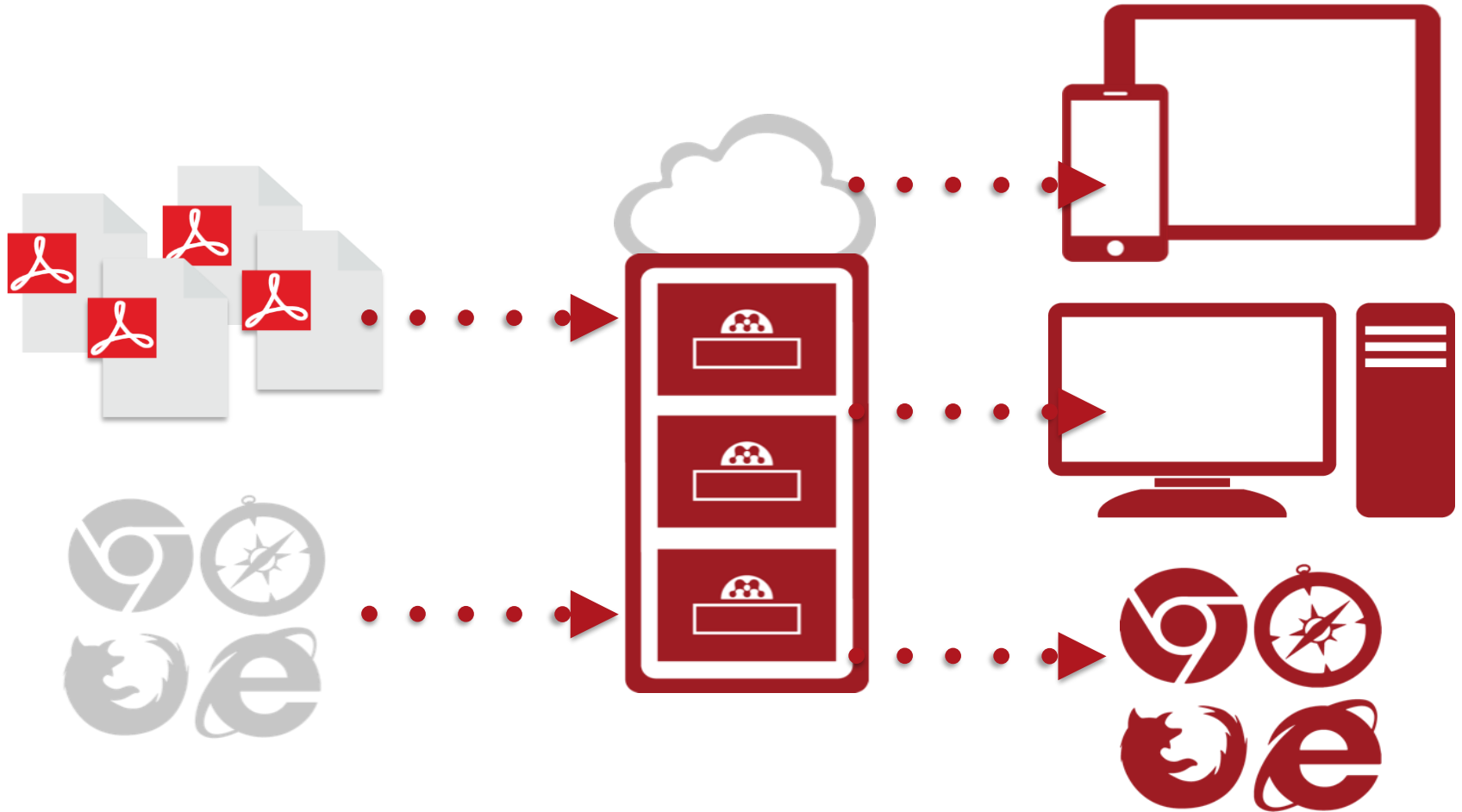


Web



Mobile

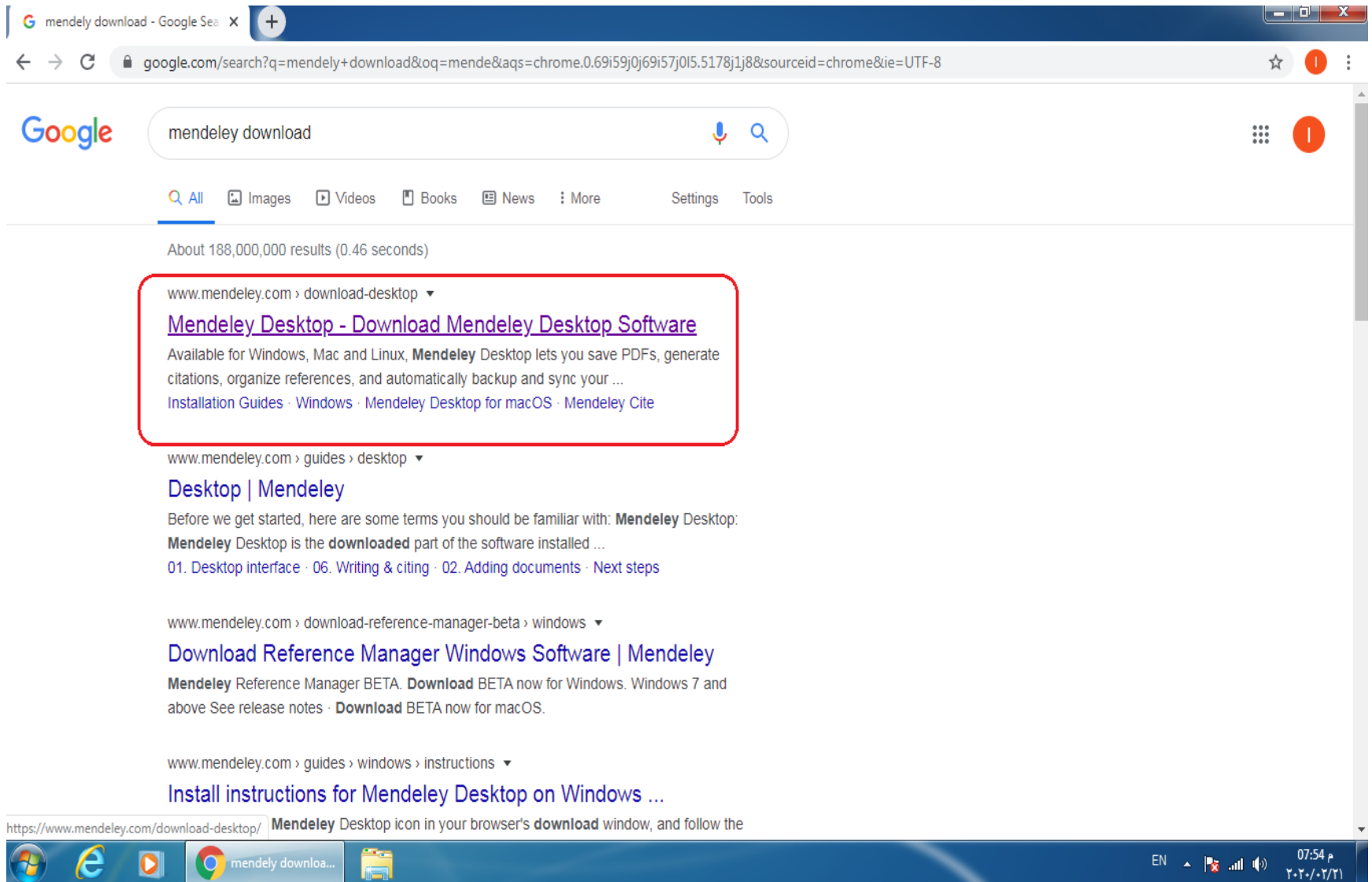
How Does Mendeley Help?



How to download Mendeley?

The background features a teal gradient. On the left, a large red circle overlaps the teal. On the right, a cluster of overlapping circles includes a large orange one at the top, a medium green one below it, a small pink one to the right of the green one, and a medium light blue one at the bottom. The text 'How to download Mendeley?' is centered in the upper left area in white.

1. Type “Mendeley” onto google and click on the “download” hyperlink:



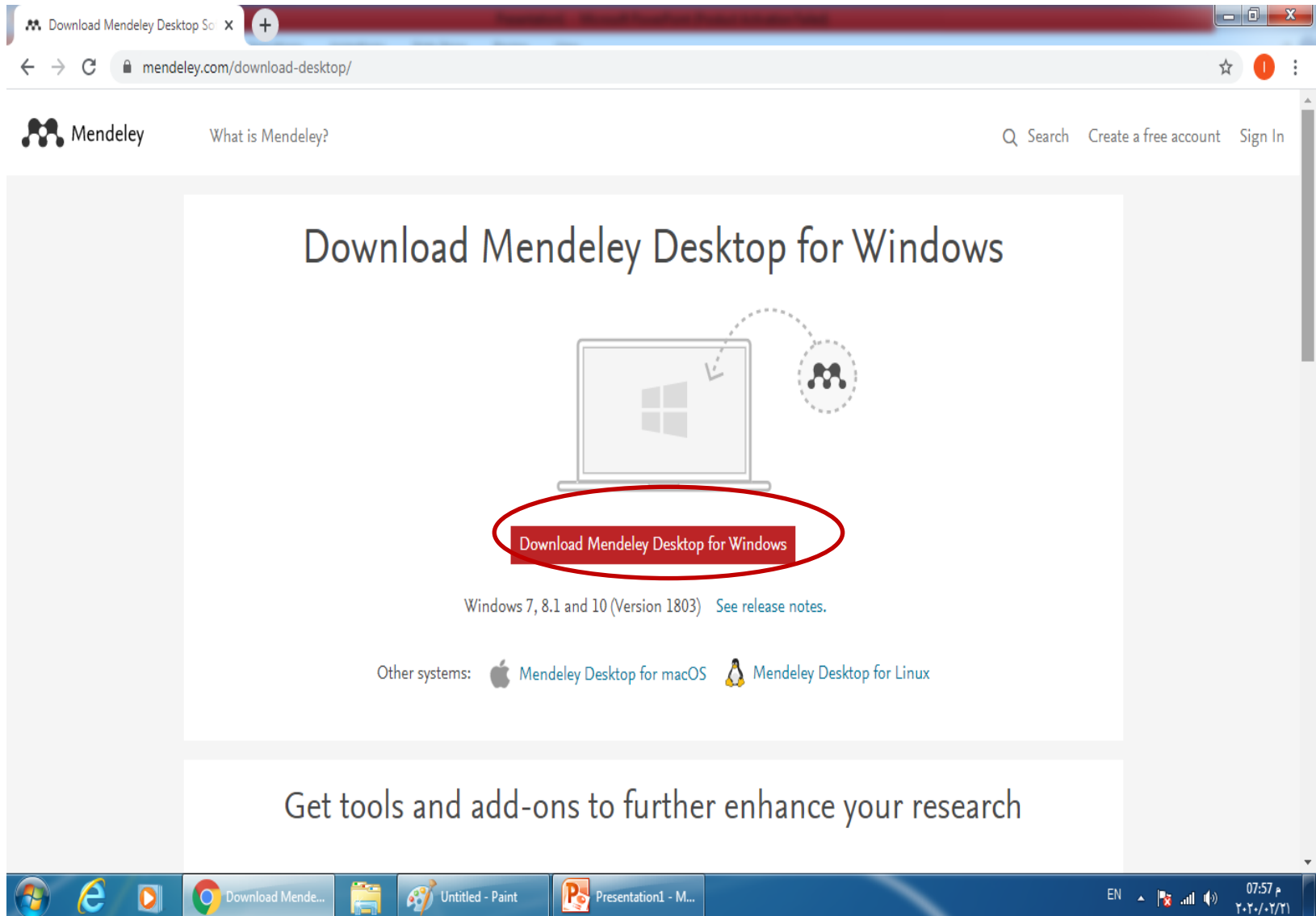
The screenshot shows a Google search for "mendeley download". The search results are displayed on a Windows desktop. The top result is "Mendeley Desktop - Download Mendeley Desktop Software", which is highlighted with a red box. Below it are other results related to Mendeley Desktop software and installation instructions.

Google search results for "mendeley download":

- www.mendeley.com › download-desktop ▾
[Mendeley Desktop - Download Mendeley Desktop Software](#)
Available for Windows, Mac and Linux, **Mendeley** Desktop lets you save PDFs, generate citations, organize references, and automatically backup and sync your ...
Installation Guides · Windows · Mendeley Desktop for macOS · Mendeley Cite
- www.mendeley.com › guides › desktop ▾
[Desktop | Mendeley](#)
Before we get started, here are some terms you should be familiar with: **Mendeley** Desktop:
Mendeley Desktop is the **downloaded** part of the software installed ...
01. Desktop interface · 06. Writing & citing · 02. Adding documents · Next steps
- www.mendeley.com › download-reference-manager-beta › windows ▾
[Download Reference Manager Windows Software | Mendeley](#)
Mendeley Reference Manager BETA. **Download** BETA now for Windows. Windows 7 and above See release notes · **Download** BETA now for macOS.
- www.mendeley.com › guides › windows › instructions ▾
[Install instructions for Mendeley Desktop on Windows ...](#)

https://www.mendeley.com/download-desktop/ **Mendeley** Desktop icon in your browser's **download** window, and follow the

2. Click “download Mendeley desktop for windows”



The screenshot shows a web browser window with the address bar displaying "mendeley.com/download-desktop/". The Mendeley logo and navigation links are visible at the top. The main content area features the heading "Download Mendeley Desktop for Windows" and a central graphic of a laptop with a Windows logo. Below the laptop, a red button labeled "Download Mendeley Desktop for Windows" is circled in red. Underneath the button, the text "Windows 7, 8.1 and 10 (Version 1803) See release notes." is displayed. At the bottom of the main content area, there are links for "Mendeley Desktop for macOS" and "Mendeley Desktop for Linux". Below the main content area, there is a section titled "Get tools and add-ons to further enhance your research". The Windows taskbar is visible at the bottom of the screen, showing the Start button, several application icons, and the system tray with the time 07:57 PM and date 2022/02/21.

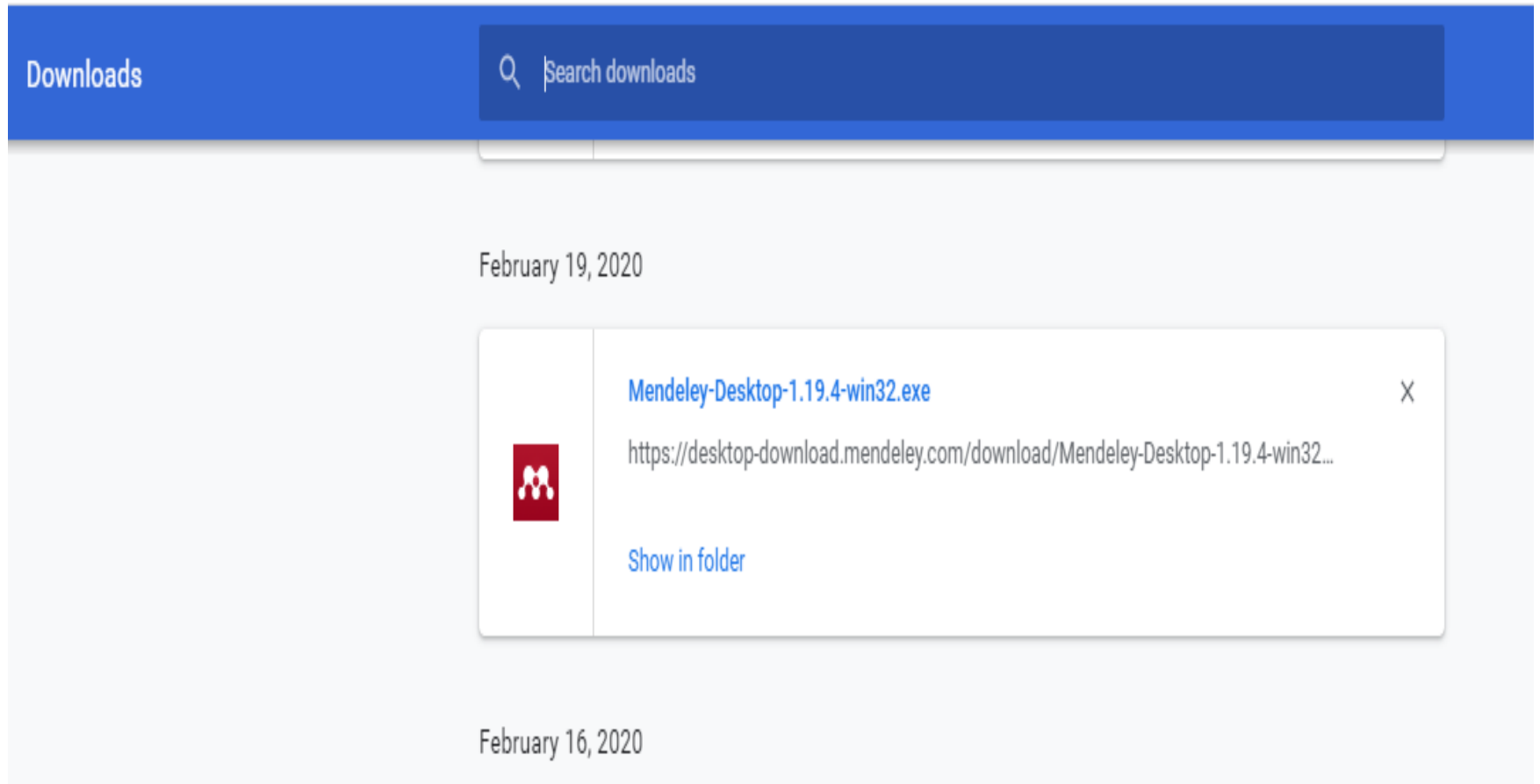
Download Mendeley Desktop for Windows

Windows 7, 8.1 and 10 (Version 1803) [See release notes.](#)

Other systems: [Mendeley Desktop for macOS](#) [Mendeley Desktop for Linux](#)

Get tools and add-ons to further enhance your research

3- Go to the download of your browser and click on the download button. This opens a list of applications that you have downloaded from the internet. Click on the “Mendeley-Desktop-1.19.4-win32.exe”.



- 4- A pop-up appears on the monitor. Click “Run” which will lead to a Wizard Setup to also come up. If you follow the instructions, it’ll eventually allow you to install the application.





Mendeley Desktop Setup



Installing

Please wait while Mendeley Desktop is being installed.

Extract: Qt5WebEngineCore.dll... 96%



Show details

Nullsoft Install System v2.51

< Back

Next >

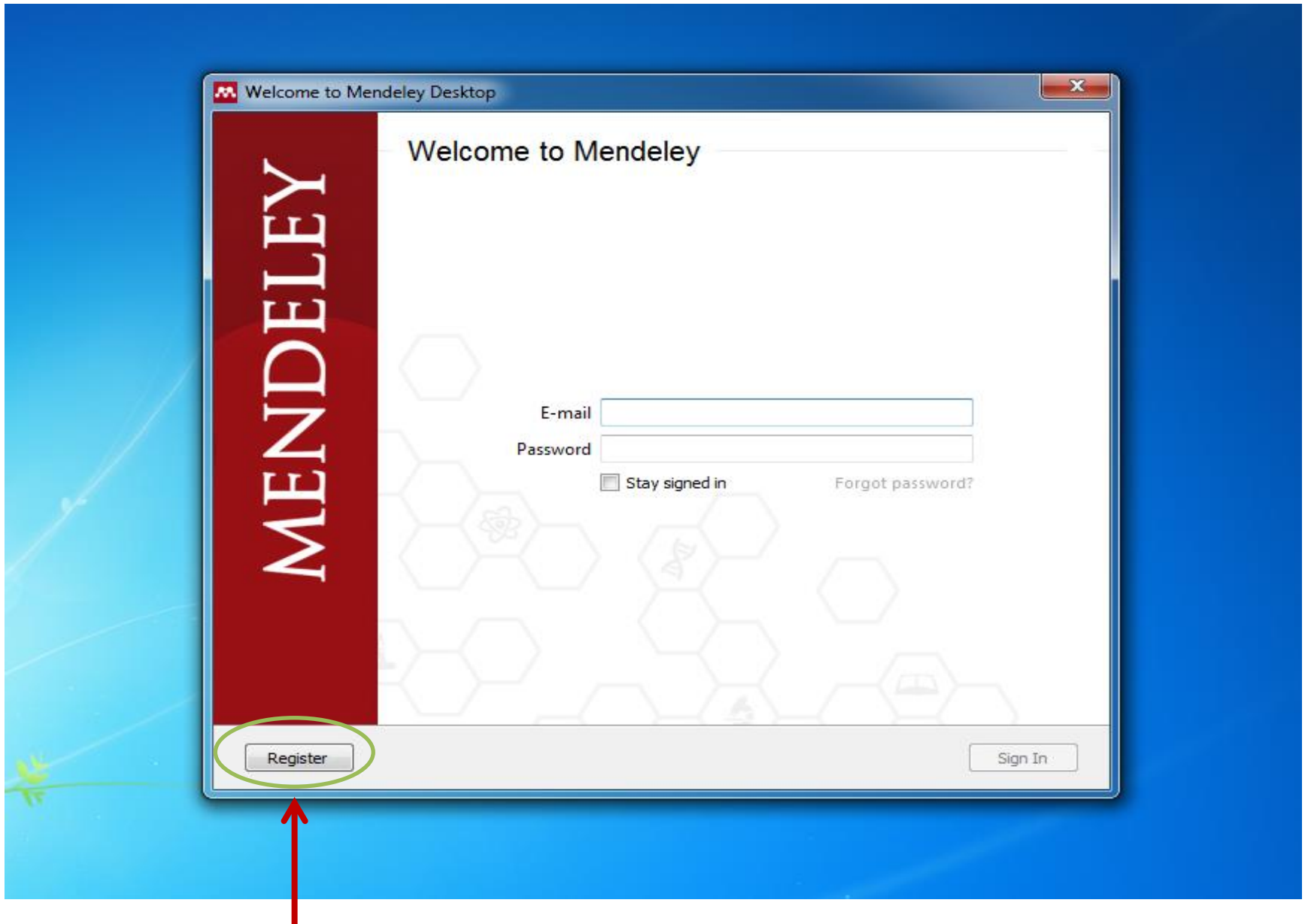
Cancel



Overview: Using Mendeley

The background features a teal gradient. On the left, a large red circle overlaps the teal. On the right, a cluster of overlapping circles includes a large orange one at the top, a medium green one below it, a small pink one to the right of the green one, and a dark red one overlapping the bottom of the green one. A light teal circle overlaps the bottom of the red circle and the bottom of the green one.

- The first thing you'll need to do is to create an account via mendeley.com



ELSEVIER

Welcome

Enter your email to continue with Mendeley

Email

as_83_2005@yahoo.com

Continue

You can also [sign in](#) via your institution, organization or OpenAthens.

ELSEVIER

Register

Create password to register

Email

as_83_2005@yahoo.com

Given name

Family name

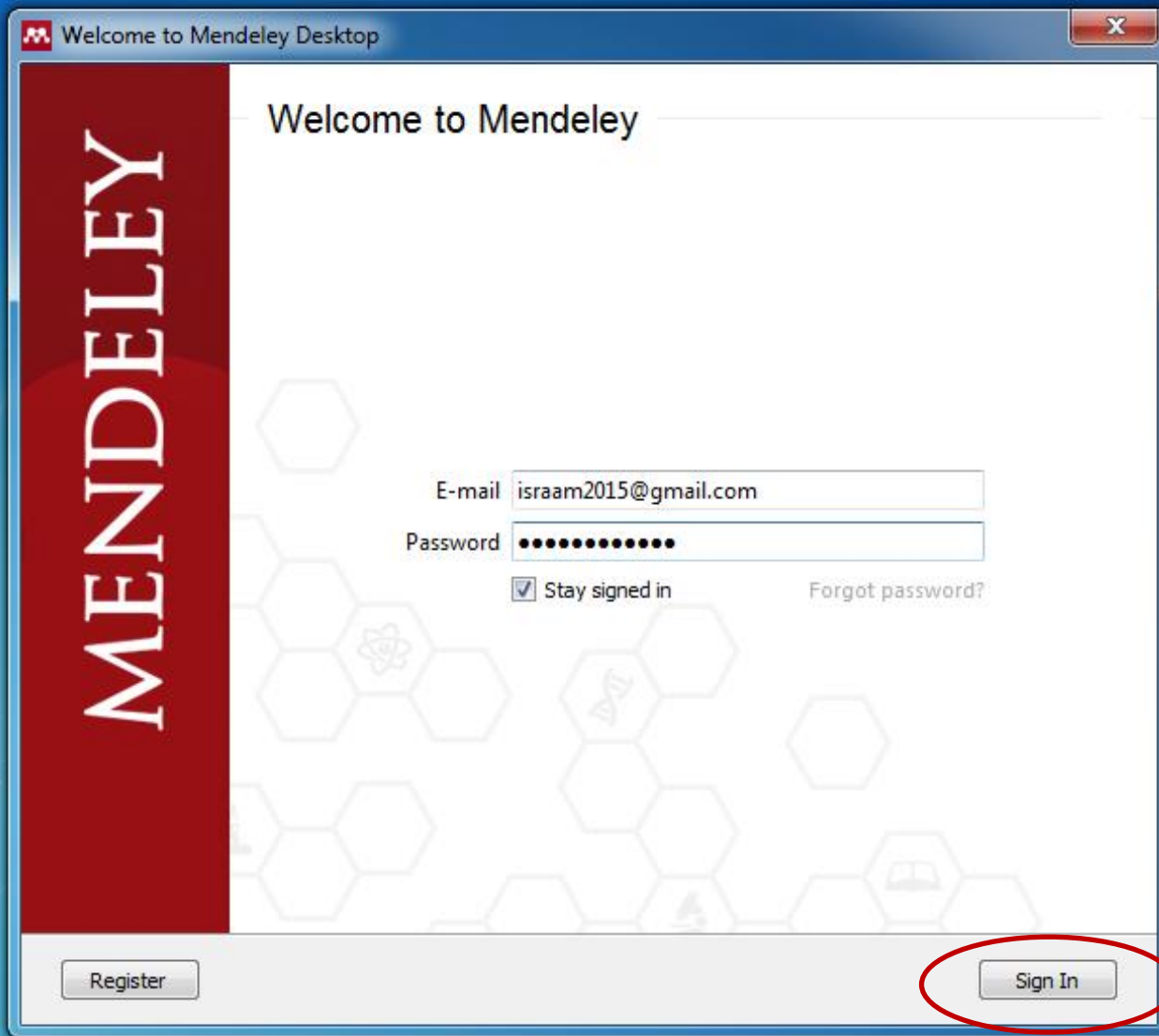
Password

Stay signed in (not recommended for shared devices)

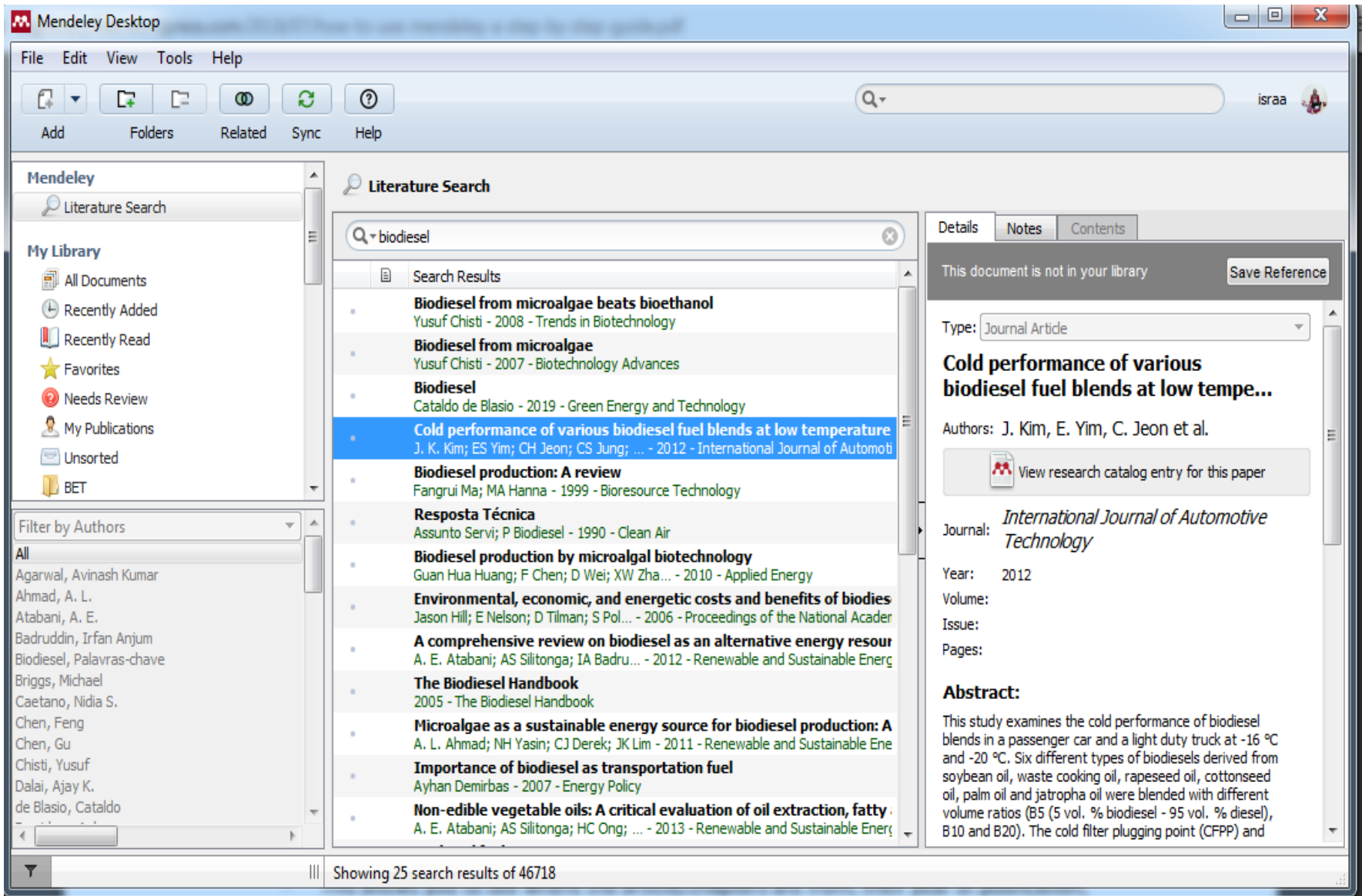
By continuing you agree with our [Terms and conditions](#) and [Privacy policy](#).

Register

[I already have an account](#)



- The application will look like this when you open it: **Mendeley Desktop**



Mendeley Web

mendeley.com/search/

Mendeley Sign In Create account

Welcome to Mendeley

Search for and add articles to your library

Search for articles... Search

Try: [COVID-19](#) | [Bioenergy](#) | [Obesity](#) | [Intrinsic Motivation](#)

Try the desktop app to manage your library
[Download Mendeley Reference Manager](#)

12:01 AM
2/8/2022

Mendeley Web

Browser navigation bar showing address: mendeley.com/reference-manager/library/all-references. Includes search, back, forward, and refresh icons. Tab bar shows 'SFU' as the active tab. Extension bar includes Google, NIST, Gmail, YouTube, Maps, Translate, Mathway Calculator, Wolfram|Alpha, and Library Genesis.

Mendeley interface header. Left side: 'Library' and 'Notebook' buttons. Right side: user profile 'Israa M.' with a dropdown arrow.

یهطلا تویز نم یویحلا لزیدلا دوقو جائنا مویسلاکلا دیسکوا مادختساب لمعصملا دعاسم لاماکه ضیبلا روشق نم جرخصملا

- + Add new
- All References
- Recently Added
- Recently Read
- Favorites
- My Publications
- Trash

- COLLECTIONS**
- New Folder
- New Collection
- GROUPS**
- New Group

		All References		Search	Filters	
<input type="checkbox"/>	AUTHORS	YEAR	TITLE	SOURCE	ADDED	FILE
<input checked="" type="checkbox"/>	Rashid S, Hayyan A, Hayyan M, Hash...	2021	Ternary glycerol-based deep eutectic solvents: Physicochem	Chemical Engineering	192021/3/	
<input checked="" type="checkbox"/>	Salman S, Rasheed I, Mohammed A	2021	Adsorption of heavy metal ions using activated carbon derive	IOP Conference Serie	112021/8/	
<input checked="" type="checkbox"/>	Rashid I, Salman S, Mohammed A	2021	Removal of pathogenic bacteria from synthetic contaminated	Energy, Ecology and E	152021/8/	
<input checked="" type="checkbox"/>	Grace I, Vinola J, Deepapriya S, John...	2020	Synthesis and characterization of nickel oxide nanoparticles	AIP Conference Proce	92021/1/	
<input checked="" type="checkbox"/>	Conference I, Biofuel U	2020	Bioenergy		112021/8/	
<input checked="" type="checkbox"/>		2020	برائلا هرودلا مسلا دلا دم ت لولآ نیرشت رهش نارود بلا رهشلا ت راذآ رهش نارود		112021/8/	
<input checked="" type="checkbox"/>	Laskar I, Deshmukhya T, Bhanja P, P...	2020	Transesterification of soybean oil at room temperature using	Renewable Energy	112021/8/	
<input checked="" type="checkbox"/>	Rani K, Neeharika T, Vardhan G, Kum...	2020	The Kinetics of the Esterification of Free Fatty Acids in Jatroj	European Journal of S	112021/8/	
<input checked="" type="checkbox"/>	Ajala E, Ajala M, Odetoye T, Aderibigb...	2020	Thermal modification of chicken eg		112021/8/	
<input checked="" type="checkbox"/>	Navajas A, Reyero I, Jiménez-Barrera...	2020	Catalytic performance of bulk and A		112021/8/	

Language selection dropdown menu showing 'English (United States)' and 'United Kingdom'. A tooltip message reads: 'To switch input methods, press Windows key + space.'

Windows taskbar showing system tray with icons for network, volume, and power. System clock displays '12:46 AM 2/8/2022'. Language indicator shows 'ENG UK'.



**Organize:
Setting Up A Library**

Mendeley Desktop

Mendeley Desktop



File Edit View Tools Help

Add Folders Sync Help

Search...

Israa

My Library

- All Documents
- Recently Added
- Recently Read
- Favorites
- Needs Review
- My Publications
- Unsorted
- New Folder
- Create Folder...

External Library

- Filter by Authors
- All
 - 129/Menkes/SK/II/2008, MENTERI KESEHATA...
 - 2017, jurnal dunia kesmas volume 6. Nomer 3...
 - A. Atiya, Mohammed
 - A.B.M, Sharif Hossain
 - Aaaaj, Abw
 - Aazza, Mustapha
 - Abad, A.
 - Abang, S.
 - Abas, Zafar
 - Abbaszaadeh, Ahmad
 - Abboud, Y.
 - Abdel- Rahim, M. A.

All Documents Edit Settings

★	●	📄	Authors	Title	Year	Published In	Added
☆	●	📄	Kennett, Austin	Chapter Three	2020	Bedouin Justice	Jan 8
☆	●	📄	Colombo, Kamila; Ender, Laercio; Barros, António Andr...	The study of biodiesel production using CaO as a heterogeneous catalytic reaction	2017	Egyptian Journal of Petroleum	Jan 8
☆	●	📄	Submitted, Thesis; Fulfillment, Partial	Synthesis of Biodiesel and Glycerol தொழில் தரவே தகுந்த கி ி ரம் தி ஶ் ஶ் ஶ்	2015		Jan 8
☆	●	📄		دادغب ةعماج - بيمز اوخلا ةسدنهلأ ةبلك ةدامع / بلا ةبييردت تارود م	2019		Jan 8
☆	●	📄	TSHIZANGA, NGOYA	A STUDY OF BIODIESEL PRODUCTION FROM WASTE VEGETABLE OIL USING EGGSHELL ASH AS A HETEROGENEOU...	2015		Jan 8
☆	●	📄	Wei, Ziku; Xu, Chunli; Li, Baoxin	Application of waste eggshell as low-cost solid catalyst for biodiesel production	2009	Bioresource Technology	Jan 8
☆	●	📄	Galván-Ruiz, Miguel; Hernández, Juan; Baños, Leti...	Characterization of Calcium Carbonate, Calcium Oxide, and Calcium Hydroxide as Starting Point to the Improvement of Li...	2009	Journal of Materials in Civil ...	Jan 8
☆	●	📄	Atabani, A. E.; Silitonga, A. S.; Badruddin, Irfan Anjum; Mahli...	A comprehensive review on biodiesel as an alternative energy resource and its characteristics	2012	Renewable and Sustainable Ener...	Jan 8
☆	●	📄	Sarno, Maria; Iuliano, Mariagrazia	Biodiesel production from waste cooking oil	2019	Green Processing and Synthesis	Jan 8
☆	●	📄	Viriya-empikul, N.; Krasae, P.; Puttasawat, B.; Yoosuk, B.; C...	Waste shells of mollusk and egg as biodiesel production catalysts	2010	Bioresource Technology	Jan 8
☆	●	📄	Muthu, K.; Viruthagiri, T.	Optimization and production of biodiesel using calcium oxide as a heterogeneous catalyst	2015	International Journal of Chemi...	Jan 8
☆	●	📄		A . 1 Gas chromatography – mass spectrometry [Ministry of Science and Technology .]			Jan 8
☆	●	📄	O'connell, Robert J.	Appendix C:	2019	William James on	Jan 8

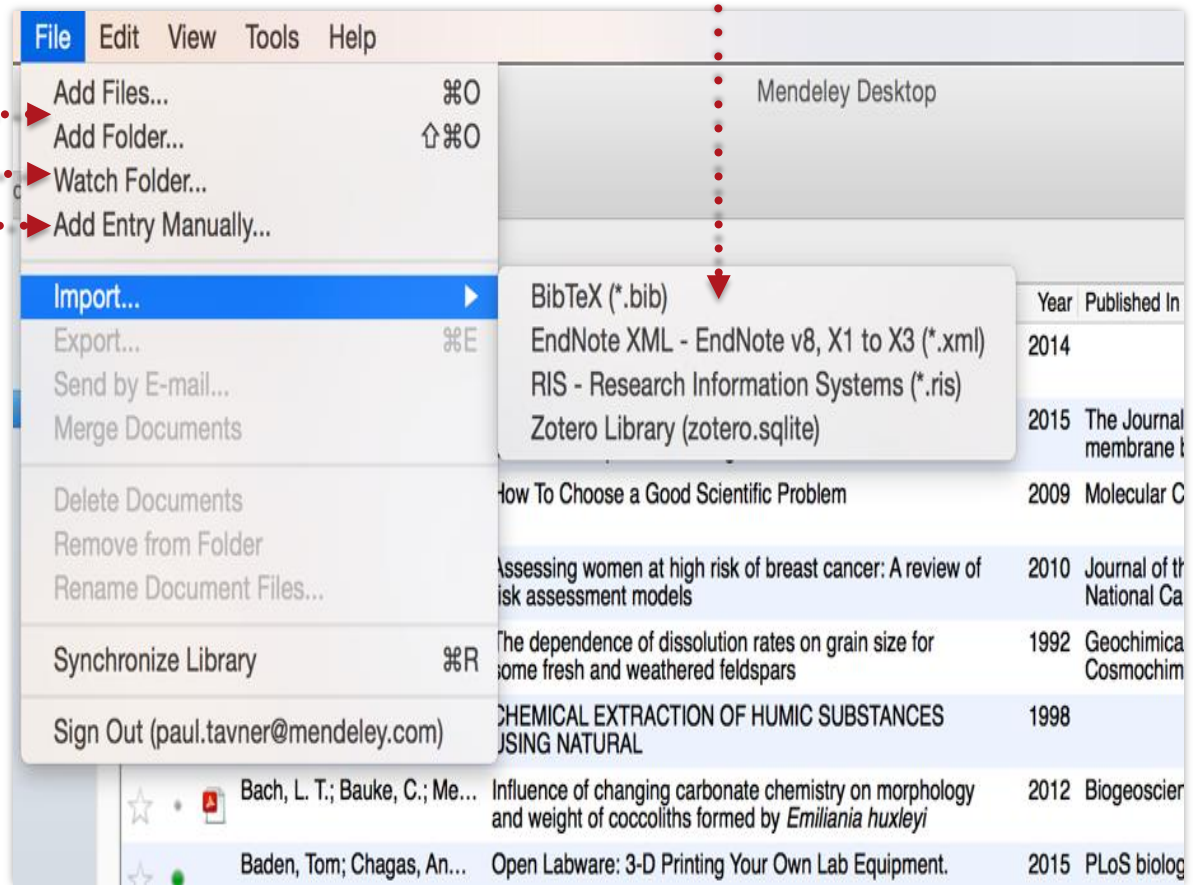
Adding Documents

Select a file or folder to add from your computer

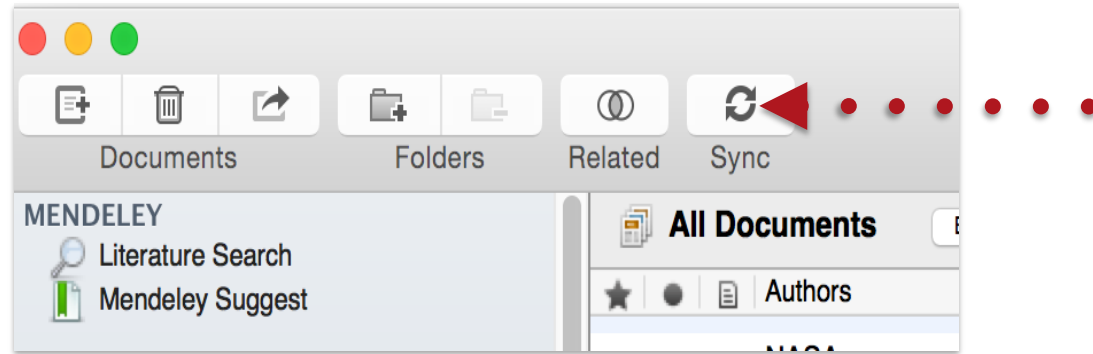
Import from another reference manager, or BibTeX

Watch a folder

Add reference by manually entering details



Sync





**Organize:
Managing Your Library**

Manage Your Library

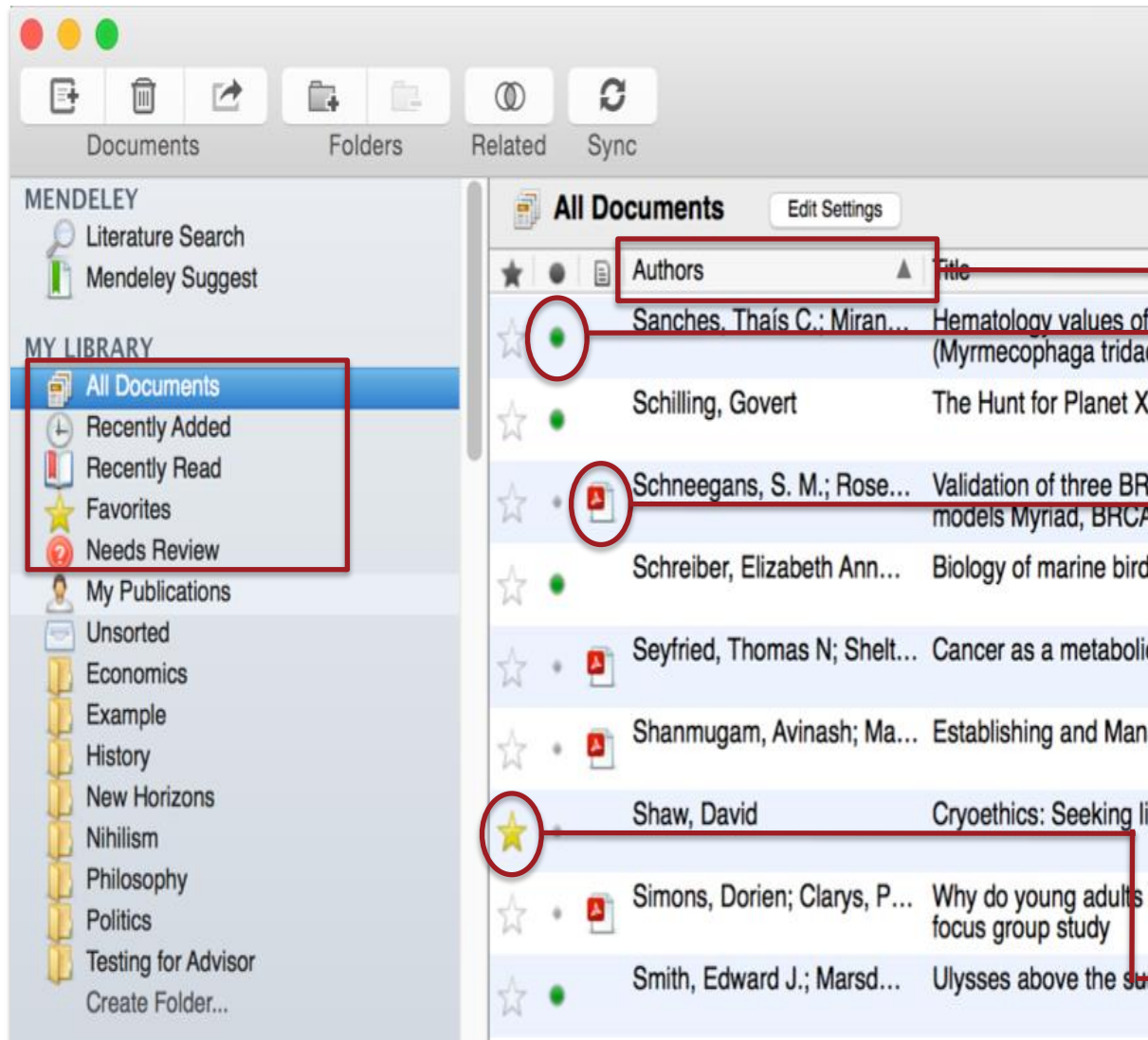
All items in your personal library

Items added in the last two weeks

Access your recently read items

All items you've starred in your library

Items in need of review



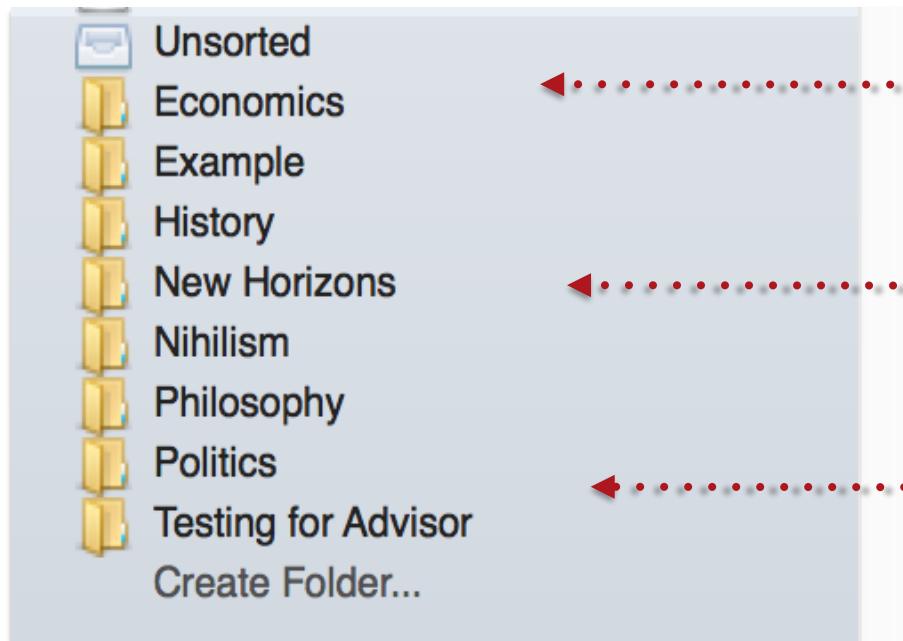
Use column headings to order your references

Mark entries read or unread

Entries with attached PDFs can be opened with the PDF Reader

Star items to mark them as favorites

Create and Use Folders

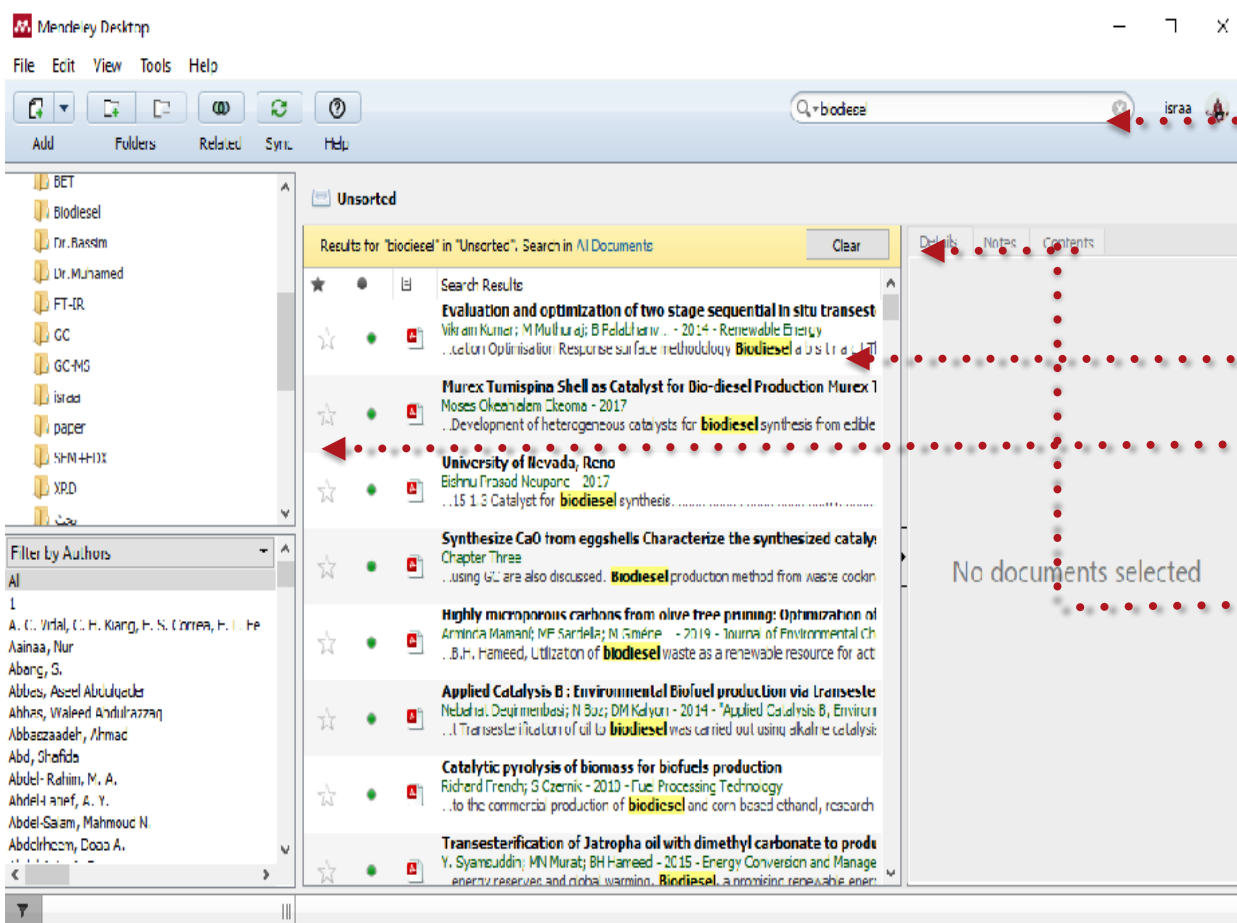


References not added to a folder will appear in 'unsorted'

Your folders will be listed below. Drag and drop to re-order them.

Use 'Create Folder' to enter a new folder name.

Search Your Documents



Enter your search term in the search field

The main view will be filtered accordingly

Click on a specific folder to search within it

Use the clear button to remove the search filter

Checking for Duplicates

The image shows a Windows Explorer window with a search for "biodiesel" in a folder named "Unsorted". A context menu is open over the folder, with the option "Check for Duplicates" highlighted in blue. The search results are displayed in a list view, showing several documents related to biodiesel production and optimization.

Context Menu:

- Invite Colleagues...
- Install Web Importer
- Uninstall MS Word Plugin
- Check for Duplicates**

Search Results:

- Evaluation and optimization of two stage sequential In situ transesterification Optimisation Response surface methodology Biodiesel** Vikram Kumar; M Mukhtaraji; B Paladhariv... - 2014 - Renewable Energy
- Murex Turispina Shell as Catalyst for Bio-diesel Production** Murex T Moses Okekelem Okeoma - 2017
- University of Nevada, Reno** Bishnu Prasad Neupane - 2017
- Synthesize CaO from eggshells Characterize the synthesized catalyst** Chapter Three
- Highly microporous carbons from olive tree pruning: Optimization of** Aminia Mamani; MF Sardela; N Gmène - 2019 - Journal of Environmental Ch
- Applied Catalysis B: Environmental Biofuel production via Transesterification of oil to Biodiesel** Neslihan Demirbas; N Buz; DM Kalyon - 2014 - Applied Catalysis B, Environ
- Catalytic pyrolysis of biomass for biofuels production** Richard Trendy; S Czernik - 2010 - Fuel Processing Technology
- Transesterification of Jatropha oil with dimethyl carbonate to produce biodiesel** Y. Syameuddin; MN Murat; BH Hameed - 2015 - Energy Conversion and Manage

Folder List:

- Dr. M. J. named
- FT-IR
- GC
- GC-MG
- israa
- paper
- SHN-H11X
- XPD

Filter by Authors:

- All
- A. C. Vidal, C. H. Kiang, F. S. Correa, F. L. de Ainaa, Nur
- Abang, S.
- Abbas, Asael Abdulqadee
- Abbas, Waleed Abdulrazzaq
- Abbaazaadeh, Ahmad
- Abd, Ghafda
- Abdel-Rahim, M. A.
- Abdel-Rahaf, A. Y.
- Abdel-Salam, Mahmoud N.
- Abdihazem, Doaa A.

Search Bar: Q + biodiesel

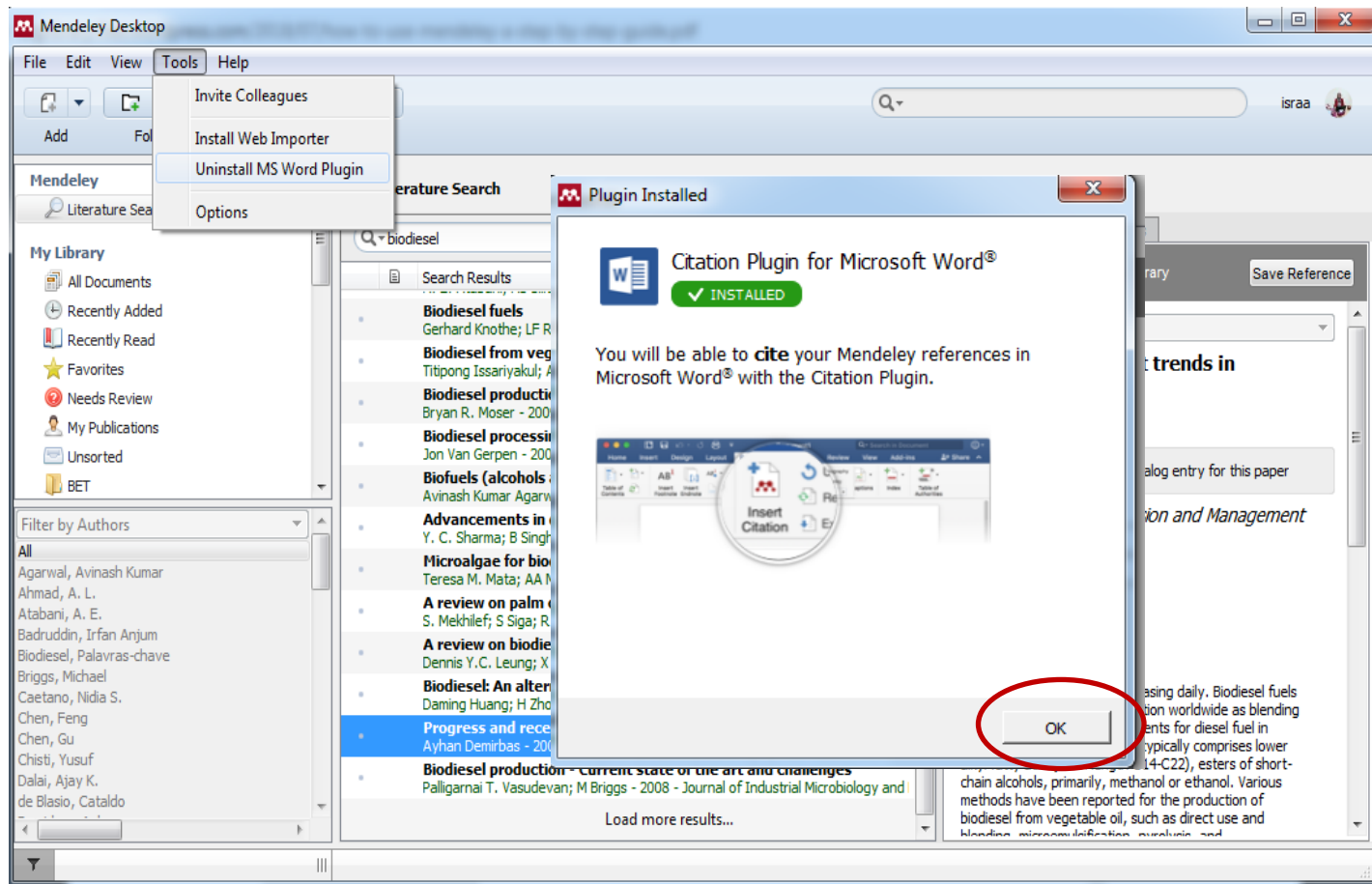
Page Status: No documents selected

Cite:

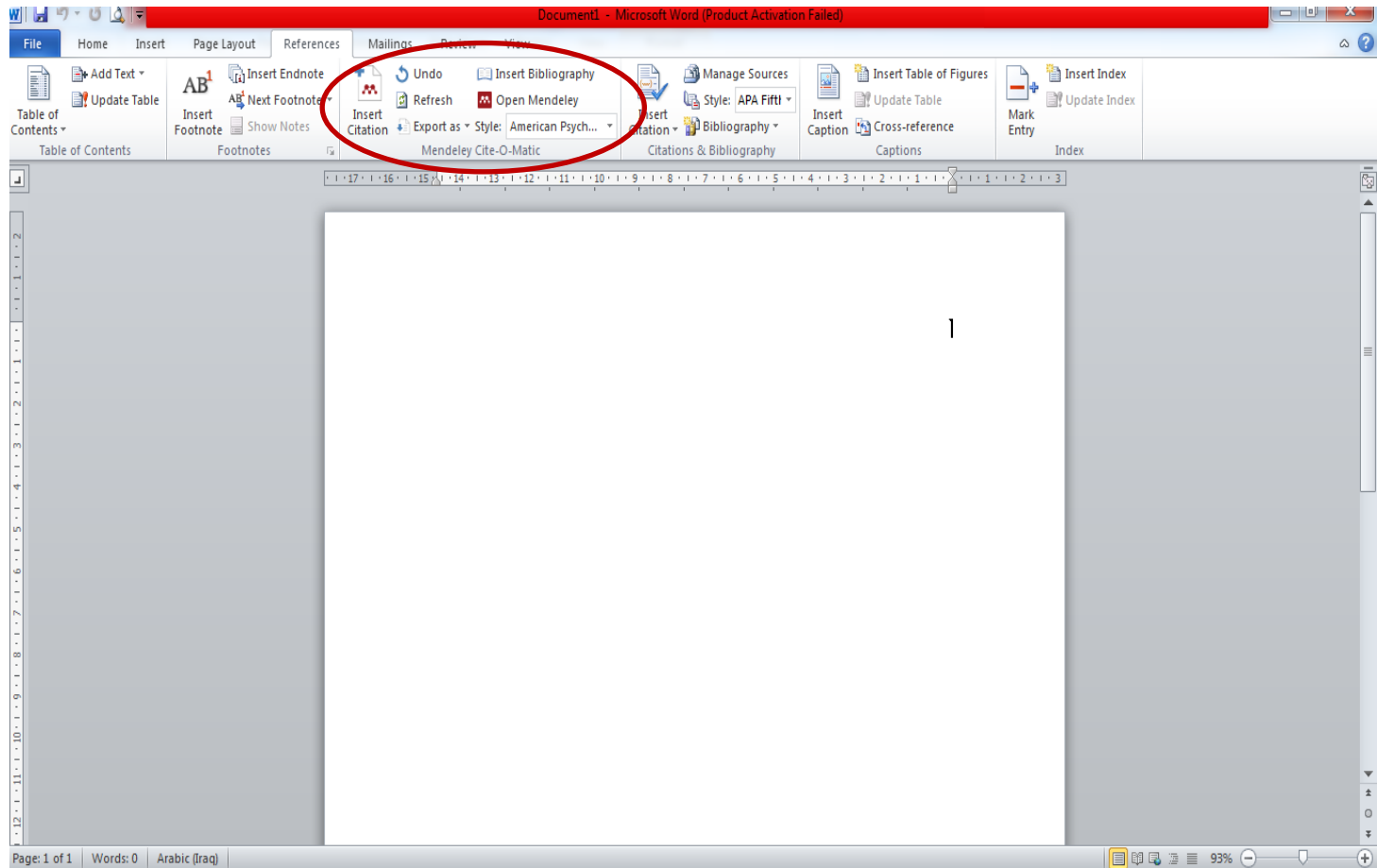
Using the Mendeley Citation Plug-In

How to reference/Cite on Mendeley

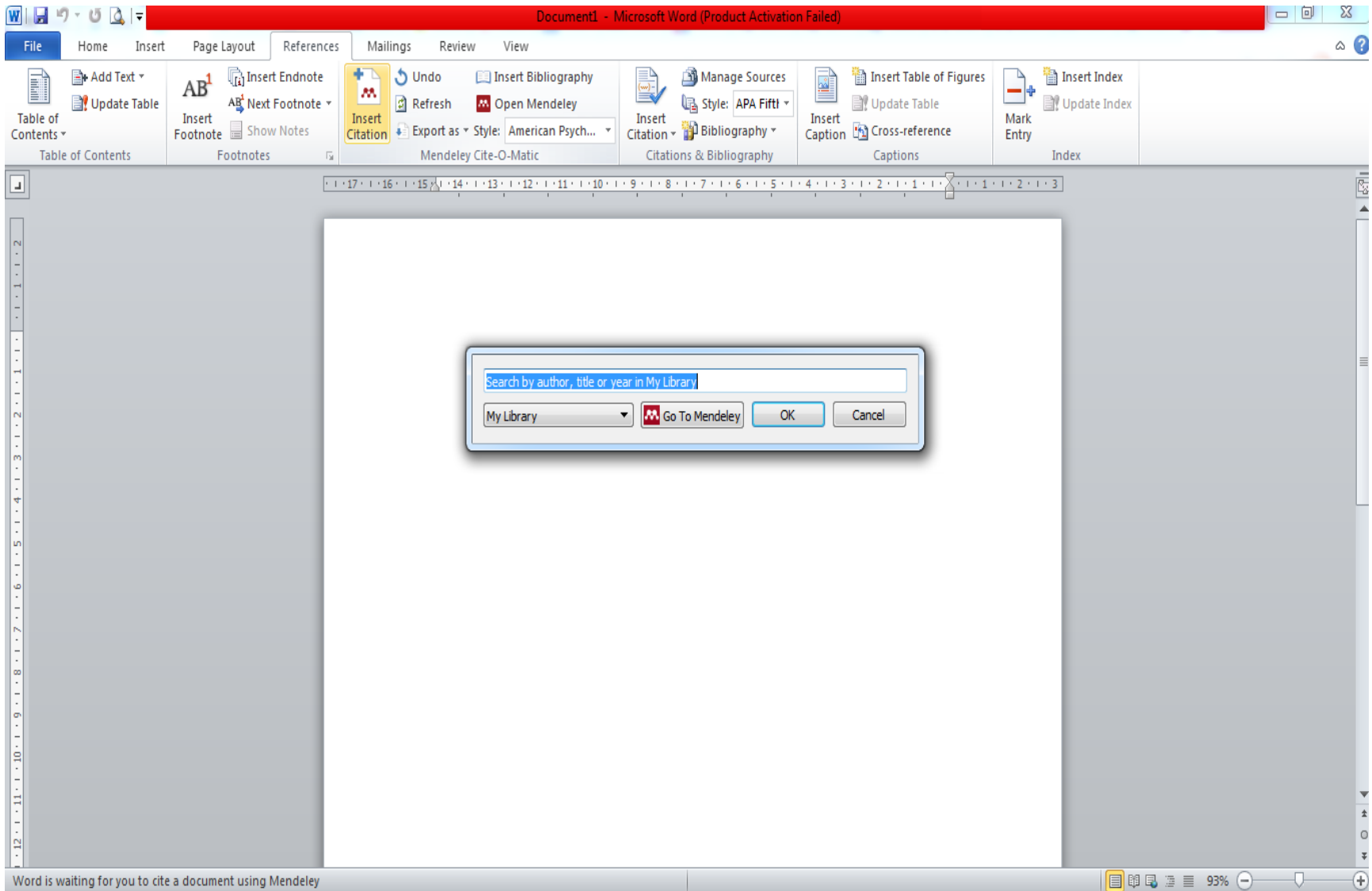
1 - Click on “tools” of the application and select the option “install WS word Plugin”



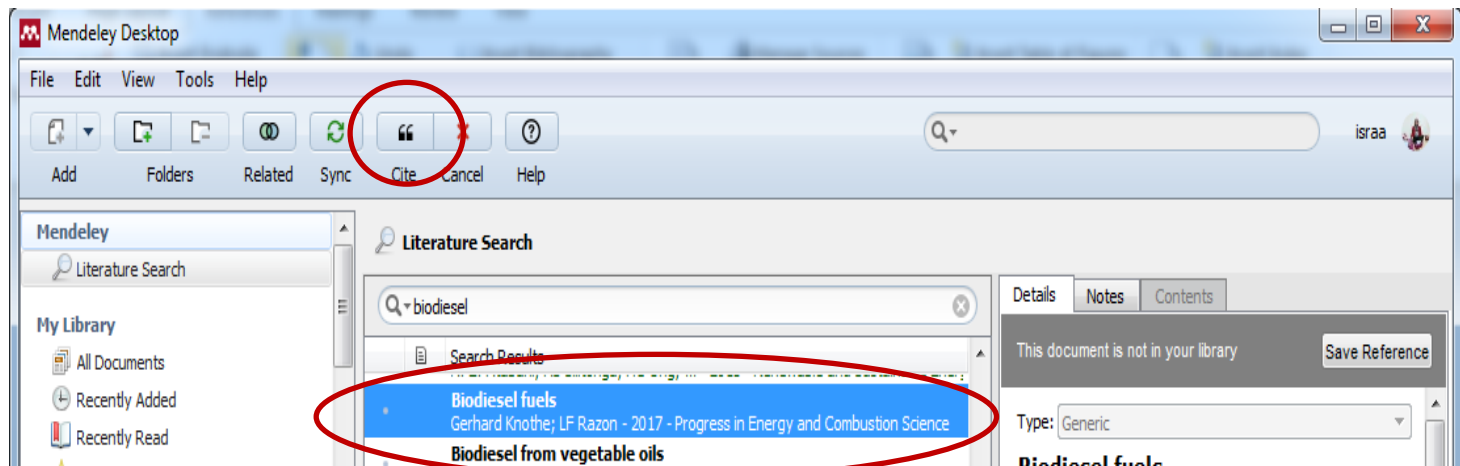
2- Open your document on Word. Select “reference” – directly under it, you’ll see “insert citation”



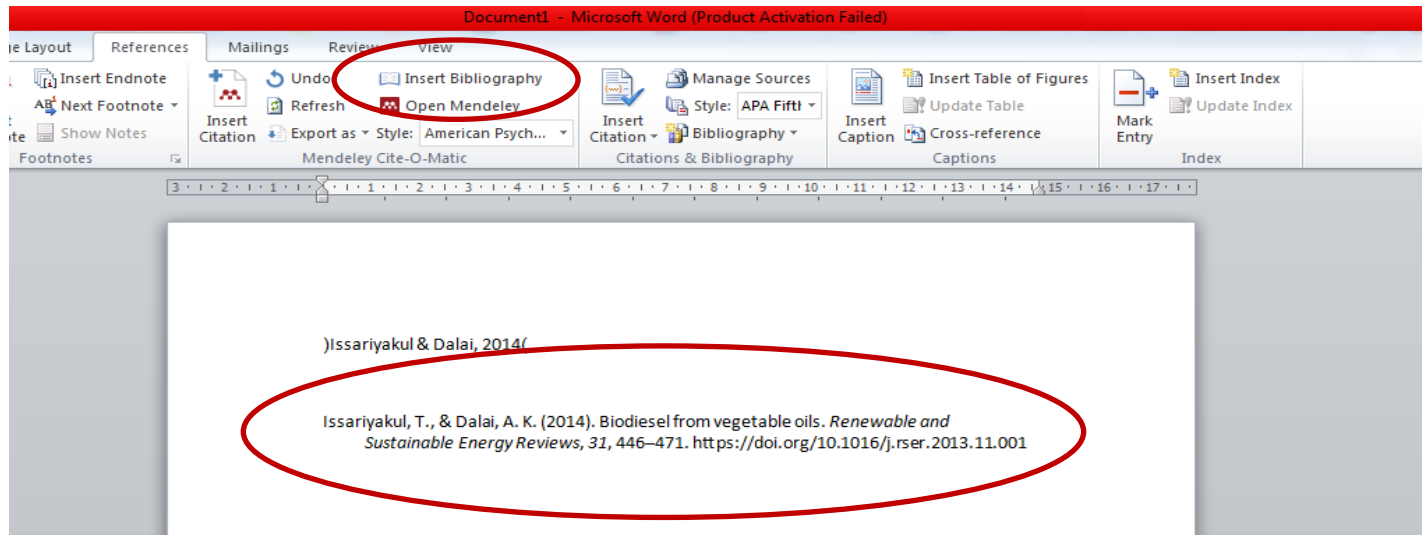
3- When you want to cite, select “insert citation” and a pop up will appear. Click on “Go to Mendeley”:



4- This will open your “library” of saved references on your Mendeley application. Click on the relevant document and select “Cite” – this will transfer the citation directly onto your word document.



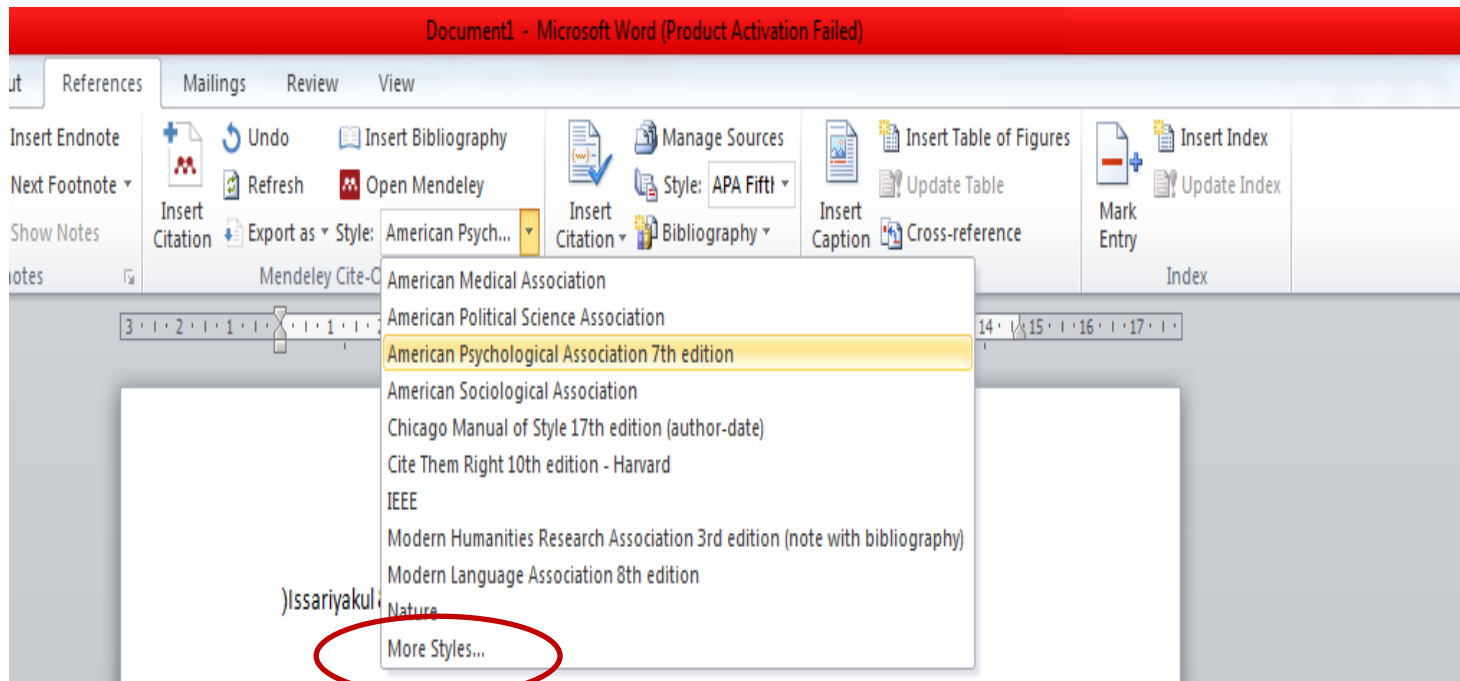
5- Once you have completed your work on the document, you can insert a bibliography simply by clicking on “insert bibliography” under “references” on the toolbar.

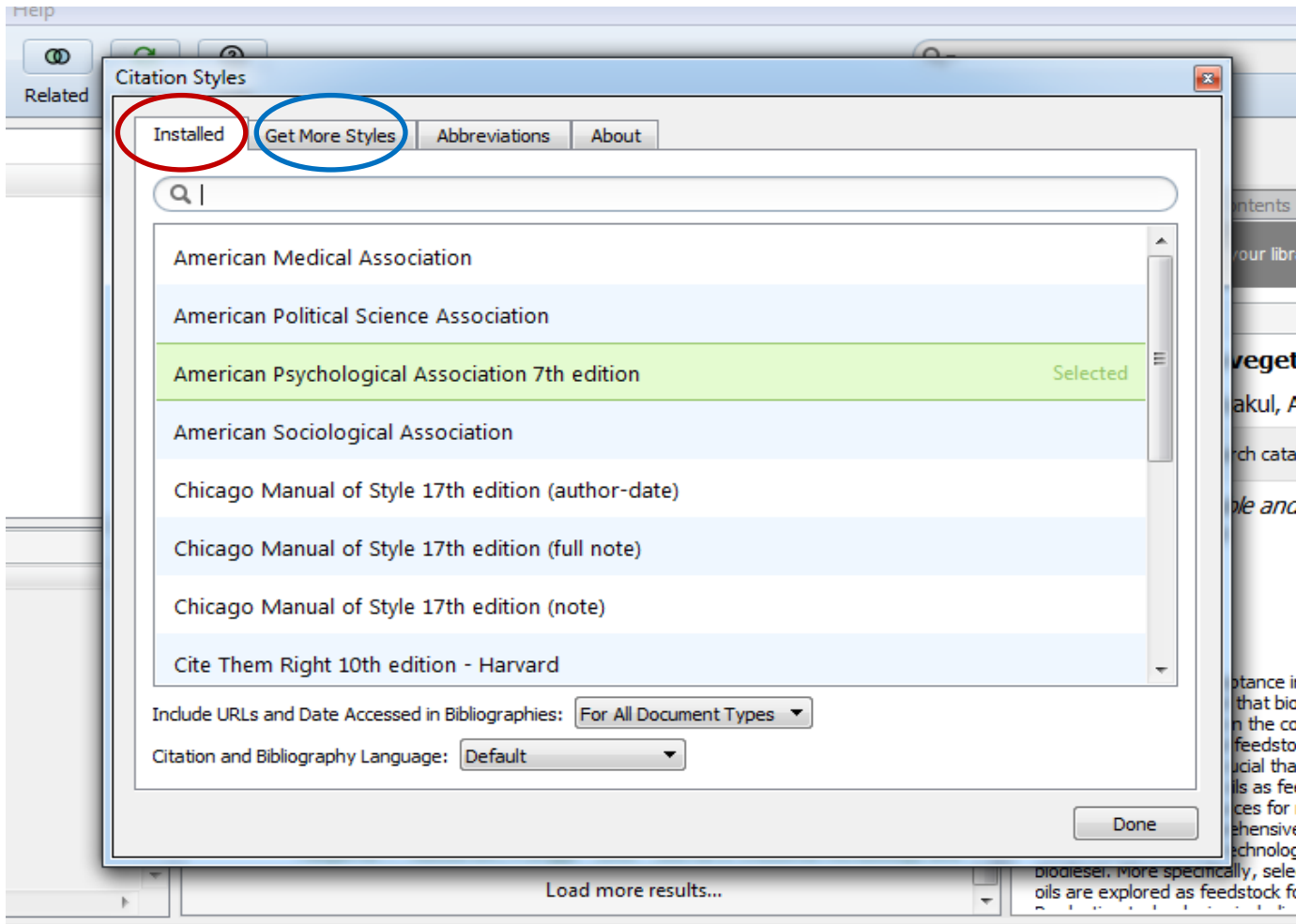


6- This will insert a list of all the references you have used when writing the document.

Changing the reference type

- 1- Sometimes, you are required to cite using a specific referencing style. You can change the referencing type using Mendeley. You can do this by clicking on “styles” and choosing “more styles...”



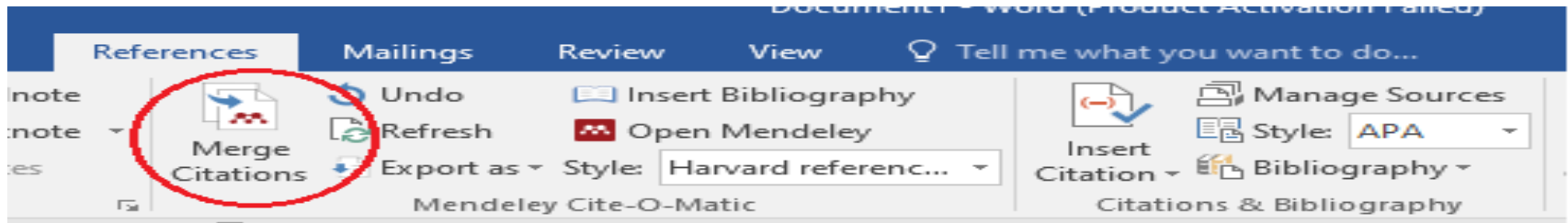


How to merge citation

1- Cite both sources as shown:

(Huang et al., 2012) (Issariyakul & Dalai,2014)

2- Highlight the citations and click on the “merge” option and the citations merge together.



(Huang et al., 2012; Issariyakul & Dalai, 2014)

How to Edit citation

Highlight the citations and click on the “Edit Citation” option a small window will appear, Edit your references.

The image shows a screenshot of the Microsoft Word interface. The 'References' ribbon is active, and the 'Edit Citation' button is circled in red with the number '2'. Below the ribbon, a citation '(Agustian, 2012; Tahvildari et al., 2015)(Farooq and Ramli, 2015)' is highlighted in grey, with a red arrow and the number '1' pointing to it. An 'Edit Citation' dialog box is open, showing the citation text 'Tahvildari 2015; Agustian 2012;' in the 'Text' field, which is circled in red with the number '3'. The dialog box also includes fields for 'Page', 'Prefix', 'Suffix', a 'Suppress author' checkbox, and a 'My Library' dropdown menu. At the bottom of the dialog box are 'Go To Mendeley', 'OK', and 'Cancel' buttons.



Collaborate

Join and Create Groups to Share References

Create Your Research Profile



Account

Scopus Profile

Subscription

Notifications

Careers Settings

Billing

Third-Party Apps

Account

Profile photo

Add or edit your Mendeley profile picture.

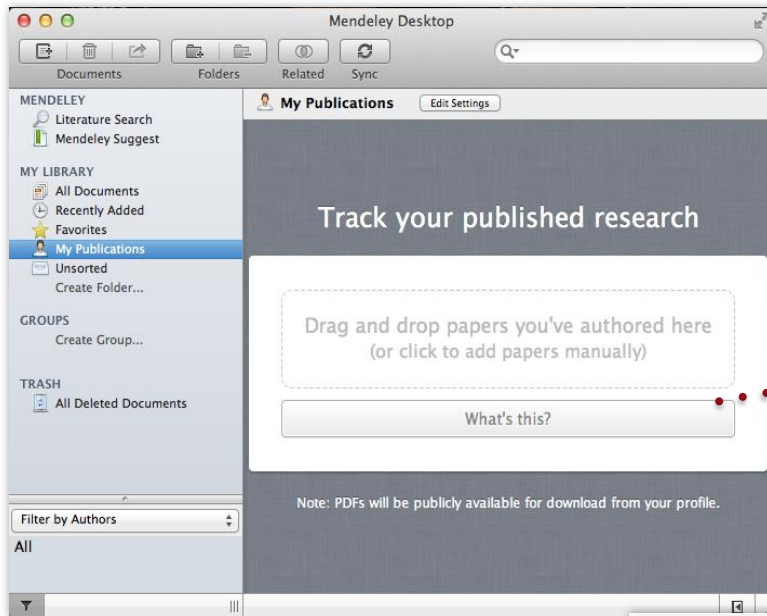


[Change photo](#) [Remove photo](#)

Personal details

Changing your basic account settings here will change them across other Elsevier products.

Showcase Your Publications



1. Add your own publications
2. Mendeley adds the PDFs to the public database
3. Showcase them on your profile



Mendeley Web Importer

Mendeley

Search Library Israa M.

Mendeley Reference Manager Mendeley Cite Mendeley Desktop Web Importer Premium Datasets

Mendeley Web Importer

Import papers, web pages and other documents directly into your reference library from search engines and academic databases. Mendeley Web Importer is available for all major web browsers.

[Get Web Importer for Chrome](#)

Mendeley

Select all Add to Mendeley

2 references detected on the page

- Developmental Programming of Fetal Growth and Development** PDF
S Mishchenko, A Valenti et al.
American Journal of Obstetrics and Gynecology, 2016
- Fetal growth velocity: the NICHD**

ENG UK 2:16 AM 2/8/2022

Use Mendeley to:

- Collaborate, organize and discover, as well as use the citation plugin.
- Automatically generate bibliographies.
- Collaborate easily with other researchers online.
- Easily import papers from other research software.
- Find relevant papers based on what you're reading.
- Access your papers from anywhere online.



THANK
YOU