



FEHİME ÇAKICIOĞLU ÖZKAN

Research ID: C-90112012;

Personal Information

- Date of Birth:03, 22,1964
 - Place of Birth:Nazilli/Aydin-TURKEY
 - Adress: İzmir Institute of Technology, Chemical Engineering Department, Gülbahçe Koyu, 35430 Urla/Izmir-TURKEY
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Summary of qualifications

- 1986 – Present:Chemical Engineering Fac/Ege University Bornova/ Izmir*
- Experience in volumetric and gravimetric adsorption system
 - Experience in water vapor and gas adsorption in adsorbents such as zeolites, MOFs
 - Experience in structural modification method of clinoptilolite (zeolite mineral)
 - Experience in Coordination of study
 - Experience in Management (2010-)

Education

1981 – 1985:Chemical Engineering Dept., Faculty of Engineering/Ege University Bornova/ Izmir

- Four years Chemical Engineering Courses including two Industrial training of two months at: EGE YILDIZ Plastic Inco. and ALIAGA Petrol Refinery.
- Diploma Project : “Investigation of Effecting Parameter on Acid Activation of Clays with Dry Method”.
- 1985 BSc Chemical Engineering

1985 – 1988:Chemical Engineering Dept., Faculty of Engineering/Ege University Bornova/ Izmir

- Research Assistant
- Research for MSc under Prof.Dr. Mesut Yenigül on: “Investigation of Optimum Condition in Production of Surface Active Material such as Branced Hydrocarbons, Alkyl Sulphonates, and Separation Methods and Application Areas”.
- 1988 MSc Chemical Engineering

1988 – 1996:Chemical Engineering Dept., Faculty of Engineering/Ege University Bornova/ Izmir

- Research Assistant
- Research for PhD under Prof.Dr. Semra Ulkü on: “Investigation of Dynamic Behaviour of the Adsorbent Beds and Evaluation of Natural Sources as Adsorbent”
- 1996 PhD Chemical Engineering

1998-1999:Chemical Engineering Dept./ Cleveland State University



Cleveland/OHIO/USA

- Pure and Binary Gas Adsorption in Volumetric system at high Pressure and modelling
- Pure Gas Adsorption in gravimetric system at high pressure
- Research for Postdoctoral study in chemical engineering (supervisor: Prof. Orhan Talu)

**General Research Interests**

Water vapour and gas adsorption on microporous materials, Adsorption Energy, Adsorption kinetics (Diffusion), adsorbents: zeolites, natural zeolite mineral (clinoptilolite), modification methods of clinoptilolite, metal organic frameworks, development of adsorbents, separation/purification of gas via adsorption; removal of pollutants via adsorption, photocatalytic degradation of pollutants, chemical sensor, photo catalysts

Taching Area and Experience

1986-1998: Research Assistant in Department of Chemical Engineering Faculty of Engineering, Ege University, Izmir, TURKEY

Courses Assisted: Thermodynamics, Chemical Engineering Thermodynamics, Heat Transfer, Chemical Engineering Laboratory to third and fourth year undergraduate students

1999-Present: Faculty in Department of Chemical Engineering Faculty of Engineering, izmir Institute of Technology, Izmir, TURKEY

- Courses thought: CS101Information Technology, CHE321Chemical engineering Thermodynamics, CHE220Thermodynamics I, CHE302Reaction Kinetics and Reactor Design, CHE312Separation Processes, CHE 311 Heat and Mass Transfer , Adsorption, Gas Separation Processes, CHE507 Solution Thermodynamics and Phase Equilibria
- Summer Practice coordinator, 2001-2007
- Diploma Supplement Team member 2005-2006
- University- Aegean Region Chamber of Industry: Committee member for accredited Lab. 2005-2007
- Vice head of Department 2010-2013
- Academic Board member of Energy Engineering Program 2010-
- Academic Board member of Environmental Engineering Program 2010-
- Coordinator of Engineering Accreditation Study, IZTECH, 2010-
- Coordinator Of Bologna Accreditation Study, ECTS, IZTECH,2010
- International Adsorption Society Mailing List Member.
- Assist. Prof, Assoc. Prof. And. Prof .Degree in chemical engineering (1999, 2006, and 2011-present, respectively)
- Vice Head of Chemical engineering Department, IZTECH, 2010-2013.
- Head of Chemical Engineering Department, IZTECH,2013-2017

Languages

Turkish: Mother Tongue

English: fluent

**Awards received**

- From Cleveland State University for Post Doctoral Study , 1999
- From International Committee of Natural Zeolites for attending zeolite'97, 1997
- From Adsorption Society to Attend FAO10, 2004

Directed Graduate Thesis**MSc Thesis**

1. Merve Dikmen(2019)
2. Cemal Güner (2019)
3. Deniz Angı (2017)
4. Gaye Kanaltı (2017)
5. Ahmet Uğur Çiçek "Synthesis of Copper based metal organic framework to separate CO₂/H₂ gas mixture, 2014.
6. İlkin Tetik "Characterization and Preparation of Tyrosinase immobilized Gelatine Films" 2014.
7. Özgün Deliismail "Preparation of Natural Zeolite supported TiO₂ composites for removal of Terephthalic Acid" 2013
8. Polatoğlu, İ. "Natural zeolite in Neutral, Acidic and Basic solution" IZTECH,2005.
9. Ertan, A." CO₂, N₂ and Ar Adsorption on Modified Zeolites", IZTECH, 2004.
10. Becer M. " Gas Adsorption in Volumetric System", IZTECH, 2003.

PhD Thesis :

1. Güneş-Yerkesikli, A. "Separation of Hydrogen from Reformer Off-gas",2013 IZTECH.
2. Polatoğlu, İ" Development of the enzyme electrode for Pesticide residue in Food", 2012, IZTECH.
3. Erten, Y. " CH₄, CO₂, N₂ and O₂ adsorption on Ca-, Li- and Ce-rich X zeolites, 2011, IZTECH

Funded Research Projects

1. Researcher, "Evaluation of Petkim Petrochemical Company Yarımca complex Dodesilbenzene Factory By products as Surface Active Materials." Industrial Project, 1986.
2. "Experimental and theoretical Investigation of dynamic behaviour of adsorbent bed, Ege University, Müh. 88/013, 1996.
3. Researcher, "Production of Camphene on Cation exchanged natural Zeolites", Ege University, 98MÜH030, 2001.



4. Researcher, "Production of some valuable monoterpenes from Isomerisation of Alpha Pinene", TUBITAK, MISAG-120, 2001.
5. Manager, "Use of natural and acid (HCl) modified zeolites for Gas separation/ purification", Izmir Institute of Technology, 2000 MÜH02, 2000.
6. Use of adsorbents for Storage of Energy" Ege University, 1988 Müh-01, 2001
7. Manager, "Adsorption of CO₂, N₂, O₂ ve CH₄ in Natural Zeolite Tuff", Izmir Institute of Technology, 2002 MÜH21, 2004
8. Manager, "Investigation of Acidic basic and Natural Behavior of Natural Zeolites" (Doğal Zeolitlerin Asit Baz ve Nötr Ortamdaki Davranışlarının İncelenmesi", 2004İYTE06, IZTECH
9. Manager, "CO₂, CH₄, N₂ ve O₂ Adsorption on Zeolite" ("Zeolitlerde CO₂, CH₄, N₂ ve O₂ Adsorption") 2005, DPT.
10. Manager, "Gas Adsorption on Ce-X zeolite" ("Ce-X zeolitinde gaz adsorpsiyonu"), 2006İYTE31, IZTECH.
11. Manager, "Development of Optical Enzyme Sensor for Detection of Pesticide Residue", 2009İYTE06, IZTECH.
12. Researcher, Recyclable Cu/TiO₂ Photocatalysts Loaded On Natural Silicates: Synthesis, Characterization and Their Photocatalytic Activities on Photocatalytic Degradation Of Terephthalic Acid Under Visible Light Irradiation, TÜBİTAK, 2011, (#:110M451).
13. Manager, "Characterization of Metal Organic Frameworks (MOFs)", 2011İYTE09, 2011.
14. Manager, Synthesis of Metal Organic Framework (MOF) and Its use for purification of Methane Reformer Off Gas, TÜBİTAK, (#:112M294), 2012-2015.
15. Manager, Development of Optical Enzyme Sensor for Pesticide Residue" TÜBİTAK, 2013-2015.
16. Manager Alüminyum Temelli Organik Ağ Yapılarında CO₂, CH₄, H₂ ve CO Adsorpsiyonunun ZLC ve Dolgulu Kolon Metotları ile İncelenmesi, (2016İYTE72) 2016-

Publications:
Articles

1. Polatoğlu, I., Çakıcıoğlu-Özkan F. Development of an optical tyrosinase biosensor (TCA) for detection of "Parathion-Methyl", Sensor Review, 39(4)pp. 604-611.
2. Çakıcıoğlu-Özkan F., Erten-Kaya Y., Enhancement of Cerium Exchange with ultrasound, J. Turkish Chemical Society, Section A: Chemistry 5 SI:1) pp:53-64, 2018
3. H.B. Yener, M. Yılmaz, Ö. Deliismail, S.F. Özkan, S.S. Helvacı , Clinoptilolite supported rutile TiO₂ composites: Synthesis,



characterization, and photocatalytic activity on the degradation of terephthalic acid, SEPARATION AND PURIFICATION TECHNOLOGY 173 (2017) 17–26

4. Erten-Kaya Y. Çakıcıoğlu-Özkan, F., Effect of Ultrasound on the kinetics of cation exchange in NaX zeolite, *Ultasonics Sonochemistry*, 19,701-706(2012)
5. Polatoglu İ., Çakıcıoğlu-Özkan, F., Aqueous interactions of zeolitic material in acidic and basic Solutions ,*Microporous and Mesoporous solutions*, 132(1-2), 219-225 (2010).
6. Çakıcıoğlu-Özkan, F., Polatoglu İ., Kinetics of Proton Transfer in The Zeolitic Tuff Central European Journal of Chemistry, 7(3), 508-51,(2009).
7. Yasemin Erten, Alev Güneş Yerkesikli, Ali Emrah Çetin, Fehime Çakıcıoğlu Özkan, CO₂ Adsorption and Dehydration Behavior of LiNaX, KNaX, CaNaX and CeNaX Zeolites”, *Journal of Thermal Analysis and Calorimetry*, Vol. 94(2008)3, 715-718.
8. F. Ozkan Cakicioglu, S. Ülkü, Diffusion Mechanism of Water Vapour in a zeolitic tuff rich in clinoptilolite, *Journal of Thermal Analysis and Calorimetry*, Vol.94(2008)3 , 690-702(3)
9. Ertan, A., Çakıcıoğlu-Özkan, F., “CO₂ and N₂ Adsorption on the Acid (HCl, HNO₃, H₂SO₄ and H₃PO₄) Treated Natural zeolites” *Adsorption*, 11, 151-156, (2005).
10. Çakıcıoğlu-Özkan, F., Ülkü, S. “The Effect of HCl treatment on Water vapour Adsorption Characteristics of Clinoptilolite rich Natural zeolite”, *Microporous and Mesoporous Materials*”, 77, 47-53 (2005).
11. Ünveren,E., Gündüz,G., Özkan,F., “Isomerization of Alpha-Pinene over acid treated natural zeolite”, *Chemical Engineering Communications*, Vol. 192, 386-404, (2005).
12. B.Topuz, M.Çiftçioğlu, F.Özkan, “Investigation of Permeability of Pure Gases in Sol-Gel Derived Al₂O₃ Membrane” *Key Engineering Materials*, Vol. 264-268, 339-402 (2004).
13. B.Topuz, M.Çiftçioğlu, F.Özkan, “ Effects of Processing on The properties and Permeability of Pure Gases Through Sol-Gel Silica Membrane” *Key Engineering Materials*, Vol. 264-268, 2187-2190 (2004).
14. Çakıcıoğlu-Özkan, F.,Ülkü,S., “Adsorption Characteristics of Lead, Barium and Hydrogen Rich Clinoptilolite Mineral”, *Adsorption Science and Technology*, Vol. 21, N: 4, 309-317 (2003).
15. Özkan, F., Gündüz,G., Akpolat,A., Buşün,N., Murzin,D., “Isomerization of alpha-pinene over ion-exchanged natural zeolites”, *Chemical Engineering Journal*, 91, 257-269, (2003).
16. Balköse, D., Özkan,F., Ulutan, S. Ülkü, S., “Water vapor Adsorption in Organic and Inorganic Polymer”, *J. Thermal Analysis and Calorimetry*, 71, 89-96, (2003).
17. Balköse,D., Özkan,F., Köktürk, U., Ulutan, S. Ülkü, S. Nişli, G., “Characterization of Hallow Chemical Garden Fibers from Metal salt”, *J. Sol-Gel Science and Technology*, 23, 253-263, (2002).



18. Beşün, N., Özkan,F. Gündüz,G., "Alpha-pinene izomerization on acid-treated clay", Applied Catalysis A: General, 224, 285-297, (2002).
19. Ülkü, S., Balköse, D., Çağa, T., Özkan, F., Ulutan, S., "A Study of Adsorption of Water Vapour on Wool under Static and Dynamic Conditions", Adsorption, 4, 63-73, (1998).
20. Balköse, D., Ulutan, S., Özkan, F.Ç., Ülkü, S., Çelebi, S., "Dynamics of Water Vapor Adsorption on Humidity-indicating Silica gel", Applied Surface Science, 134, 39-46, (1998).
21. Balköse, D., Ulutan, S., Özkan F., Ülkü, S., Köktürk, U., "Flexible Poly(Vinyl Chloride)-Zeolite Composites for Dye -Adsorption from Aqueous Solutions", Separation Science and Technology, 31(9), 1279-1289, (1996).
22. Ülkü, S., Balköse, D., Baltacıoğlu, H., Özkan (Çakıcıoğlu) , F., Yıldırım, A., "Natural Zeolites in Air Drying", Drying Technology, 10, No:2, 479-490, (1992).
23. Ülkü, S., Özkan (Çakıcıoğlu) F., , "Energy Recovery in Drying Applications", Renewable Energy, 1, No: 5/6, 695-698, (1991).

**Publications:
Preceding
articles**

1. Alüminyum içeren Metal Organik Kafes Yapılarının Sentezlenmesi ve CO₂ tutma performanslarının incelenmesi, Ulusal Kimya Mühendisliği Kongresi, 2014
2. Bakır içeren Metal Organik Kafes Yapılı Bileşiklerin Sentezlenmesi ve Karekterizasyonu, Ulusal Kimya Mühendisliği Kongresi, 2014
3. Geri akım Altında Zn4O[(OOC)2C6H4]3 (MOF-5) Metal-Organik Ağ Yapılarının Üretimi ile İlgili Ön Çalışmalar, Ulusal Kimya Mühendisliği Kongresi, 2014
4. Terephthalic Acid(TPA) Adsorption on Natural Zeolite Supported Composites, Zeolite2014: 9th International Conference on the Occurrence, Utilization and properties of Natural Zeolites. , 2014
5. Ti Bazlı Metal Organik Ağ Yapılarının Özelliklerine Üretim Yöntemi ve Reaksiyon Koşullarının Etkisi, Ulusal Kimya Mühendisliği Kongresi, 2014
6. Synthesis of Metal Organic Framework (CuTPA) for CO₂ adsorption, International conference on environmental Science and Technology, ICOEST2013, 2013
7. Adsorption Behavior of Terephthalic Acid on TiO₂ Nano Particles Synthesized by Thermal Hydrolysis Method., International conference on environmental Science and Technology(ICOEST2013), 2013
8. Removal of Terephthalic Acid Via Adsorption on Clinoptilolite Rich Natural Zeolite, International conference on environmental Science and Technology(ICOEST2013), 2013
9. Synthesis of MOF-5 and CuTPA Metal Organic Frameworks, International Porous and Powder Materials Symposium and Exhibition(PPM2013), 2013



10. Adsorption Kinetics of Steam Methane Reformer (SMR) Off Gas on MIL53(Al), International Porous and Powder Materials Symposium and Exhibition(PPM2913), 2013.
11. İlker Polatoğlu, Fehime Çakıcıoğlu Özkan , The Influence of Temperature, pH and Organic Solvents on Tyrosinase Activity, International Conference on Enzyme Science and Technology, 31 October-4 November 2011, Kusadasi, Turkey
12. İlker Polatoğlu, Fehime Çakıcıoğlu-Özkan,"The Buffering Effect of Natural Zeolite on Gastric Disturbance, 6th Chemical Enginnering Conference for Collaborative Research in Estern Mediterranean Countries- EMCC06, Antalya-Turkey,2010.
13. Erten Y., Çakıcıoğlu-Özkan F., "Application of The Zero Length Column (ZLC) Technique for Measuring Crystal Diffusivities of NaX and CeNaX Zeolites", Diffusion-Fundamentals.Org, 11 (2009) 28, Pp 1-2
14. Sibel Sancaklı, Hatice Sarıbaş, İlker Polatoğlu, Fehime Özkan Effect of ultrasound on the preparation of Lithium and silver Rich NaX Zeolite , SOMER Sempozyumu, 14-16 Mayıs 2007, ODTU, Ankara
15. Alper Aydınlı, Can Okan Depboylu, Beyhan Candever, Fehime Özkan Praperation of the Support for Enzyme Immobilization, SOMER Sempozyumu, 14-16 Mayıs 2007, ODTU, Ankara
16. Ozkan, F., Avsar, H. and Ertan, A., "Chemical Behaviour of Natural Zeolite Tuff in Aqueous Medium, Natural and Acidic" , 8th International Conference on Fundamentals of Adsorption, Arizona-USA, 2004.
17. Talu A., Gumma S. Lu, X.F. and Ozkan F. " Problems with Volumetric-Gravimetric Measurements" 8th International Conference on Fundamentals of Adsorption, Arizona-USA, 2004.
18. Ertan, A., Özkan, F., Ülkü, S., Modifiye Edilmiş Zeolitlerde CO₂, N₂ ve Ar Adsorpsiyonu 6. Kimya Mühendisliği Kongresi, TOA-45, Bildiri Özetleri Kitabı, İzmir, 2004.
19. Turan, O., Polatoğlu, İ., Ertan, A., Özkan, F., H₃PO₄ ile işlem Görmüş Doğal Zeoliitlerin Karekterizasyonu 6. Kimya Mühendisliği Kongresi, ÖP-25, Bildiri Özetleri Kitabı, İzmir, 2004.
20. Ertan, A., Avşar, H., Özkan, F. Doğal zeolitlerin Sulu Ortamdaki Kimyasal Davranışının incelenmesi, 6. Ulusal Kil Sempozyumu, 705- 712, İzmir, 2003. Özkan, F., Becer, F., Balköse, D., Ülkü, D., Asit ile Modifiye Edilmiş Klinoptilolitin Karekterizasyonu , 6. Ulusal Kil Sempozyumu, 363- 371, İzmir, 2003.
21. Uçar S. Yılmaz S., Artok L., Ozkan, F., Doğal Zeolit Destekli Pd Katalizörlerle Sitral Hidrojenasyonu Ulusal Kimya Mühendisliği Kongresi, Bildiri Özetleri Kitabı, Ankara Üniversitesi, Ankara, 2002.
22. Ünveren E. Ozkan, F., Gündüz, G., Köktürk U., İşlem Görmüş Doğal Zeolit Üzerinde Alfa Pinen İzomerizasyonu, 5. Ulusal Kimya



Mühendisliği Kongresi, Bildiri Özeti Kitabı Kod: RM11, Ankara Üniversitesi, Ankara, 2002

23. Balkose D., Ulku, S, Ozkan, F. "Development of Dessicating Packing Materials", International Packaging Congress, 163-171, izmir-Turkey, 2001.
24. Uçar Ş., Yılmaz, S., Altok, L., Özkan, F., "Liquid phase hydrogenation of citral over zeolite supported catalysts", Eastern Mediterranean Chemical Engineering Conference, Ankara-Turkey, 128, 2001.
25. Balkose D., Ozkan, F., Ulku, S., "Column Drying of humidity indicating wool" , Eastern Mediterranean Chemical Engineering Conference, 302-303, Ankara-Turkey, 2001.
26. Ozkan, F., Akpolat, O., Murzin, D.Y., Gunduz, G., Besun, N., " Isomerization of Alpha pinene over Ion –exchanged Natural Zeolites", 15th International Conference on Chemical Reactors , 168-171, Helsinki, Filand, 2001.
27. Akpolat, O., Gunduz, G., Özkan, F., Asit ile Modifiye Edilmiş Doğal Zeolitler Üzerinde Alfa Pinen İzomerizasyonu, 4. Ulusal Kimya Mühendisliği Kongresi, Bildiri Özeti Kitabı s: 354-359 (Ed: M. Hasdemir, İ. Boz, A. Kaşgöz), İstanbul Üniversitesi, Avcılar-İstanbul, 2000.
28. Ozkan, F., Ülkü, S., Ambalajlama ve Depolamada Doğal Zeolit Mineralinin (Klinoptilolit) Kullanılması, 99'Uluslararası Ambalaj Kongresi ve Sergisi, 213-220, İzmir, 1999.
29. Balköse, D., Özkan, F., Köktürk, U., Ulutan, S., "Hallow Fibers from Water Glass and Metal Salts", An International Conference on Silica Science and Technology From S (Synthesis) to A (Application), Proc. of Silica'98: 79-82, 1998.
30. Ozkan, F.Ç., Ülkü, S., "Local Zeolite Mineral (Clinoptilolite) in Energy Systems", 2nd International Energy and Environment Symposium, 505-508, Trabzon, Turkey. Begell House, Inc., 1998.
31. Özkan, F., Ülkü, S., Ambalaj Sanayiinde Nem Tutucu olarak Doğal Zeolitin (Klinoptilolit) Kullanılması, Ambalaj Teknolojisi ve Yan Sanayii Kongresi, Bildiriler Kitabı, s:277-285, 1997. Plastik ve Ambalaj Teknolojisi, Nisan-Mayıs 1998, Sayı: 25, s: 102-110,
32. Ozkan (Çakıcıoğlu), F., Ülkü, S., Doğal ve Modifiye Edilmiş Klinoptilolitin Su Buharı ve Karbon dioxide Adsorpsiyonu, 3.Uluslararası Kimya Mühendisliği Kongresi, Erzurum, 273-278, 1998.
33. Özkan F., Ülkü, S., Enerji Depolama Sistemlerinde Yerel Doğal Zeolit Mineralinin (Klinoptilolit) Kullanımı, 11. Ulusal Isı Bilimi ve Teknolojisi Kongresi (Eds: A.Can, E.Ataer), s: 43-52, 1997.
34. Özkan(Çakıcıoğlu), F., Ülkü, S., Demirci, A., "H₂O and CO₂ Adsorption on Natural and Modified Clinoptilolite from Bigadiç TURKEY", Zeolite'97, 5th International Conference of the Occurrence, Properties and Utilization of the Natural Zeolites, (Eds: F.A.Mumpton and C.Collella), 241-243, Ischia-İtalya, 1997.



35. Ülkü, S., Balköse, D., Ulutan, S., Özkan (Çakıcıoğlu) , F., Çağa, T., Yüne Su Buharı Adsorpsiyonunun Statik ve Dinamik Koşullarda İncelenmesi, 1. Ulusal Kimya Mühendisliği Kongresi, Tebliğ Kitabı, ss169-178, ODTÜ, Ankara, 1994.
36. Çağa, T., Çiftçioğlu, M., Ülkü, S., Özkan (Çakıcıoğlu) , F., Destekli Nikel Katalizör Hazırlanmasındaki Bazı Parametrelerin İncelenmesi, 1. Ulusal Kimya Mühendisliği Kongresi, Tebliğ Kitabı, s:57, ODTÜ, Ankara, 1994.
37. Özkan, F., Ülkü, S., Balköse, D., KocabAŞ, T., Keskin, G., Pişkin, M., Lityum Değiştirme İşlemi ile Elde Edilmiş Klinoptilolitçe Zengin Doğal Zeolit Numunelerinin Karekterizasyonu, 4. Ulusal Kimya Mühendisliği Kongresi, Bildiri Özetleri Kitabı, s: 903-908, (Ed: M. Hasdemir)
38. Ülkü, S., Çakıcıoğlu, F., Taşkıran S., Isıtma ve Soğutma Sistemlerinde Adsorbentler, 6.Kimya ve Kimya Mühendisliği Sempozyumu, Bildiri Özetleri Kitabı, s: 12-13, 1989.
39. - Çakıcıoğlu,F., Yenigül , M., Düz ve Dallanmış Olefinik Hidrokarbonların Sulfonasyonu ile Elde Edilen Ürünlerin Yüzey Aktif Madde Olarak Kullanım Alanlarının İncelenmesi, 4. Kimya ve Kimya Mühendisliği Sempozyumu Tebliğ ve Poster Özetler, ss: 638-640, 1987.
40. - Çakıcıoğlu,F., Peker, S., Umaç, N., Böke, N., Killerin Kuru Yöntemle Asit Aktivasyonuna Etki Eden Parametrelerin İncelenmesi, 2. Ulusal Kil Sempozyumu, Hacatepe Üniversitesi (Edt: M. Niyazi Gündoğdu, Hüsnü Aksoy), Bildiriler Kitabı, ss: 187-203, 1985.