

Prof. ÜMÜT AY

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Education Information

Doctorate, Ege University, Fen Bilimleri Enstitüsü, Kimya (YI), Turkey 1992 - 1998

Postgraduate, Ege University, Fen Bilimleri Enstitüsü, Kimya (YI), Turkey 1988 - 1992

Undergraduate, Ege University, Faculty Of Science, Kimya Bölümü, Turkey 1982 - 1986

Foreign Languages

English, B2 Upper Intermediate

Certificates, Courses and Trainings

Education Management and Planning, Kimyasal Ölçümlerde Kalite, TÜBİTAK, UME, 2018

Dissertations

Doctorate, Development of method for the determination of heavy metals in environmental samples and its applications, Ege Üniversitesi, Fen Bilimleri Enstitüsü, Kimya (YI), 1998

Postgraduate, Determination of organic and inorganic Tin compounds by molecular emission cavity analysis, Ege Üniversitesi, Fen Bilimleri Enstitüsü, Kimya (YI), 1992

Research Areas

Chemistry, Analytical Chemistry, Atomic and Molecular Spectroscopy, Natural Sciences

Academic Titles / Tasks

Professor, Kocaeli University, Fen Edebiyat Fakültesi, Kimya, 2021 - Continues

Associate Professor, Kocaeli University, Fen Edebiyat Fakültesi, Kimya, 2017 - 2021

Assistant Professor, Kocaeli University, Fen Edebiyat Fakültesi, Kimya, 1998 - 2015

Research Assistant, Kocaeli University, Fen Edebiyat Fakültesi, Kimya, 1994 - 1998

Research Assistant, Ege University, Faculty Of Science, Kimya Bölümü, 1993 - 1994

Academic and Administrative Experience

Kocaeli Üniversitesi, Fen-Edebiyat Fakültesi, Kimya Bölümü, 2003 - 2013

Kocaeli Üniversitesi, Fen-Edebiyat Fakültesi, Kimya Bölümü, 2006 - 2009

Courses

Environmental chemistry, Undergraduate

Advanced Instrumental Analysis, Doctorate

Analitik Kimya I, Undergraduate

Advising Theses

Ay Ü., Zeytin yağlarının oksidatif bozunmasının floresans tekniği ile incelenmesi, Postgraduate, F.Kara(Student), Continues

Ay Ü., İçme sularında demir türlemesi, Postgraduate, M.Aşık(Student), Continues

Ay Ü., Deniz Suyunda Bazı Organokalaylı Bileşiklerin Tayini için Metot Geliştirme ve İzmit Körfezi'ndeki Uygulamaları, Doctorate, M.Tunç(Student), 2021

Ay Ü., Poliaromatik bileşiklerle oluşan inclusion kompleksler üzerine ağır metallerin etkisinin floresans tekniği ile incelenmesi, Postgraduate, S.Ezgi(Student), 2020

Ay Ü., İzmit körfezi deniz suyunda doğu, merkez ve batı basenleri su kolonlarında derinliğine göre ağır metal tayini, Postgraduate, T.Varol(Student), 2012

Ay Ü., Bebek mamalarında özütleme metodu kullanılarak arsenik miktarının HG-AAS ve GF-AAS ile belirlenmesi, Postgraduate, Ö.Gündoğdu(Student), 2009

Ay Ü., Çevre örneklerinde eser element analizi için yöntem geliştirme ve farklı uygulamalar, Doctorate, S.Karayünlü(Student), 2008

Ay Ü., Flotasyon ve önderiştirme tekniklerini kullanarak arseniğin tayin edilebilme koşullarının incelenmesi, Postgraduate, S.Atar(Student), 2005

Jury Memberships

Doctorate, Doctorate, Kocaeli Üniversitesi, August, 2020

Post Graduate, Post Graduate, Kocaeli Üniversitesi, August, 2020

Post Graduate, Post Graduate, Kocaeli Üniversitesi, August, 2020

Published journal articles indexed by SCI, SSCI, and AHCI

- Effect of Heavy Metals on Dynamic and Static Quenching of the Fluorescence of the Host-Guest Inclusion Complex Methyl-beta-Cyclodextrin by 2,9-Dimethyl-4,7-Diphenyl-1,10-Phenanthroline in Aqueous Media**
AY Ü.
JOURNAL OF APPLIED SPECTROSCOPY, vol.88, no.4, pp.838-846, 2021 (Journal Indexed in SCI)
- Quantification of tributyltin in seawater using triple isotope dilution gas chromatography-inductively coupled plasma mass spectrometry achieving high accuracy and complying with European Water Framework Directive limits**
Tunç M., Ay Ü., Can S. Z., Bingöl D., Ün İ.
JOURNAL OF CHROMATOGRAPHY A, vol.1637, 2021 (Journal Indexed in SCI)
- Dynamic and static fluorescence quenching on the inclusion complex formed by [3-(4-methylphenyl)-4,5-dihydro-1,2-oxazole-4,5-diyl] bis (methylene) diacetate and methyl-beta-**

cyclodextrin in aqueous media

Ay Ü., Sarli S. E. , KARA Y. S.

SPECTROSCOPY LETTERS, vol.53, no.9, pp.692-704, 2020 (Journal Indexed in SCI)

- IV. **Formation mechanism and photo physical behaviors of Pyrene-Methyl-beta-cyclodextrin complex at excited state**
Sarli S. E. , Ay U.
INORGANIC CHEMISTRY COMMUNICATIONS, vol.114, 2020 (Journal Indexed in SCI)
- V. **SPECIATION OF IRON (Fe²⁺, Fe³⁺) IN VARIOUS DRINKING WATERS USING FAAS AND UV-VISIBLE SPECTROSCOPY**
Asik M., Ay Ü.
FRESENIUS ENVIRONMENTAL BULLETIN, vol.29, no.8, pp.6591-6596, 2020 (Journal Indexed in SCI)
- VI. **An Experimental Study to Synthesize and Characterize Host-Guest Encapsulation of Anthracene, and the Quenching Effects of Co and Ni**
Sarli S. E. , Ay U.
JOURNAL OF SOLUTION CHEMISTRY, vol.48, pp.1535-1546, 2019 (Journal Indexed in SCI)
- VII. **Investigation by Fluorescence Technique of the Quenching Effect of Co²⁺ and Mn²⁺ Transition Metals, on Naphthalene-Methyl-Beta-Cyclodextrin Host-Guest Inclusion Complex**
Ay U., SARLI S. E.
JOURNAL OF FLUORESCENCE, vol.28, no.6, pp.1371-1378, 2018 (Journal Indexed in SCI)
- VIII. **THE STUDY OF ADSORPTION OF ANTHRACENE ONTO PMMA-FUNCTIONALIZED MWCNTS AND PRISTINE MWCNTS BY FLUORESCENCE SPECTROSCOPY TECHNIQUE**
Ay U., Isik M., ARSU N.
FRESENIUS ENVIRONMENTAL BULLETIN, vol.26, no.6, pp.3886-3890, 2017 (Journal Indexed in SCI)
- IX. **The effect of heavy metals on the anthracene-Me-beta-cyclodextrin host-guest inclusion complexes**
Ay Ü., Dogruyol Z., ARSU N.
SUPRAMOLECULAR CHEMISTRY, vol.26, no.1, pp.66-70, 2014 (Journal Indexed in SCI)
- X. **Novel inorganic-organic hybrid polymers to remove heavy metals from aqueous solution**
Bozbas S., Ay Ü., KAYAN A.
DESALINATION AND WATER TREATMENT, vol.51, pp.7208-7215, 2013 (Journal Indexed in SCI)
- XI. **Investigation of heavy metal pollutants at various depths in the Gulf of Izmit**
Ergül H. A. , Varol T., Ay U.
MARINE POLLUTION BULLETIN, vol.73, no.1, pp.389-393, 2013 (Journal Indexed in SCI)
- XII. **Chemometric evaluation of the heavy metals distribution in waters from the Dilovasi region in Kocaeli, Turkey**
BİNGÖL D., Ay Ü., Bozbas S., Uzgoren N.
MARINE POLLUTION BULLETIN, vol.68, pp.134-139, 2013 (Journal Indexed in SCI)
- XIII. **DEVELOPMENT OF A NEW METHOD FOR THE DETERMINATION OF ARSENIC IN BABY FORMULAS BY USING EXTRACTION METHOD**
GUNDOGDU O., Ay U.
FRESENIUS ENVIRONMENTAL BULLETIN, vol.22, no.12, pp.3584-3587, 2013 (Journal Indexed in SCI)
- XIV. **DETERMINING FLOTATION CONDITIONS OF ZINC WITH COPPER alpha-BENZOIN-OXIME**
Karayunlu S., Ay U.
FRESENIUS ENVIRONMENTAL BULLETIN, vol.20, pp.1553-1557, 2011 (Journal Indexed in SCI)
- XV. **Spectrophotometric Determination of Total Inorganic Arsenic with Hexamethylene Ammonium-Hexamethylenedithiocarbamate in Nonionic Triton X-100 Micellar Media**
Karayunlu S., Ay U.
JOURNAL OF ANALYTICAL CHEMISTRY, vol.65, no.3, pp.244-248, 2010 (Journal Indexed in SCI)
- XVI. **Modification in direct analysis method: metal levels in raw milk at the region of Izmit by graphite furnace atomic absorption spectrophotometer**
Ay U., Karayunlu S.
INTERNATIONAL JOURNAL OF FOOD SCIENCE AND TECHNOLOGY, vol.43, no.2, pp.326-329, 2008 (Journal Indexed

in SCI)

- XVII. **Separation of Tl(I) and Tl(III) from environmental water samples by flotation method coupled with Zeeman ETAAS determination**
Bundalevska J., Koyuncu I., Ay Ü., Cundeve K., Akcin G., Stafilov T.
JOURNAL OF ENVIRONMENTAL SCIENCE AND HEALTH PART A-TOXIC/HAZARDOUS SUBSTANCES & ENVIRONMENTAL ENGINEERING, vol.40, no.5, pp.1045-1054, 2005 (Journal Indexed in SCI)
- XVIII. **Atomic absorption spectrometry determination of Cd, Cu, Fe, Ni, Pb, Zn, and Tl traces in seawater following flotation separation**
KOJUNCU Y., BUNDALEVSKA J., Ay U., CUNDEVA K., STAFILOV T., AKCIN G.
SEPARATION SCIENCE AND TECHNOLOGY, vol.39, no.11, pp.2751-2765, 2004 (Journal Indexed in SCI)
- XIX. **Cobalt(III) hexamethylenedithiocarbamate as a new collector for flotation preconcentration of iron, nickel, lead, and zinc prior to ETAAS**
Ay U., CUNDEVA K., AKCIN G., STAFILOV T., ZAJKOVA V., PAVLOVSKA G.
ANALYTICAL LETTERS, vol.37, no.4, pp.695-710, 2004 (Journal Indexed in SCI)
- XX. **Interferences in the quartz tube atomizer during arsenic and antimony determination by hydride generation atomic absorption spectrometry**
Ay U., HENDEN E.
SPECTROCHIMICA ACTA PART B-ATOMIC SPECTROSCOPY, vol.55, no.7, pp.951-958, 2000 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **Chemometric Evaluation of the Heavy Metal Contents in Surface Soils from the Dilovası Region (Kocaeli/Turkey)**
Bingöl D., Karayünlü Bozbaş S., Ay Ü., Uzgören N.
Cumhuriyet Science Journal, vol.38, pp.23-33, 2018 (International Refereed University Journal)
- II. **Novel tyrosine-containing inorganic-organic hybrid adsorbent in removal of heavy metal ions**
Kayan A., Arican M. O., Boz Y., Ay Ü., Karayunlu Bozbas S.
JOURNAL OF ENVIRONMENTAL CHEMICAL ENGINEERING, vol.2, no.2, pp.935-942, 2014 (Journal Indexed in ESCI)

Refereed Congress / Symposium Publications in Proceedings

- I. **Comparison of removal lead (II) from aqueous solution on novel inorganic/organic hybrid materials**
Boz Y., Karayünlü Bozbaş S., Ay Ü., Kayan A.
6th Black Sea Basin Conference on Analytical Chemistry, Trabzon, Turkey, 10 - 14 September 2013, pp.189-191
- II. **Investigation trace amounts of metals in freshwater and sea water by absorption of the metal ion on resins**
Ay Ü., Koyuncu İ., Akçin G., Cundeve K., Stafilov T.
2nd Black Sea Basin Conference on Analytical Chemistry, İstanbul, Turkey, 14 - 17 September 2003, pp.198
- III. **Anorganik organik hibrid malzemesi sentezlenerek sulardaki Pb(II) ve Cd (II) iyonlarının uzaklaştırılması**
Karayünlü Bozbaş S., Yalçın G., Ay Ü.
II.Eser Analiz Çalıştayı, Trabzon, Turkey, 27 - 30 June 2012, pp.96
- IV. **Sulu çözeltilerden Poli GPTS kullanarak bakır iyonunun uzaklaştırılması**
Karayünlü Bozbaş S., İmren S., Ay Ü.
II.Eser Analiz Çalıştayı, Trabzon, Turkey, 27 - 30 June 2012, pp.96
- V. **The effect of heavy metals on the anthracene methyl beta cyclodextrin host guest inclusion complexes**
Ay Ü., Doğruyol Z., Arsu N.
RSC Macrocyclic and Supramolecular Chemistry Meeting, Bath, United Kingdom, 19 - 20 October 2011, pp.1-2

- VI. **Heavy Metal Concentrations in Biota and sediment and Sea Water Samples from Dil İskelesi Region**
Ergül H. A. , Ay Ü., Karademir A., Çayır B., Topçuoğlu S., Telli B., Terzi M.
CIESM 39, Venice, Italy, 3 - 05 October 2010, vol.1, pp.246
- VII. **Denizel izleme çalışmalarına disiplinler arası yaklaşım ve İzmit körfezinde sürdürülen bazı uygulamalar**
Ergül H. A. , Karademir A., Pekey B., Ay Ü., Topçuoğlu S., Telli B., Terzi M.
20.Ulusal Biyoloji Kongresi, Denizli, Turkey, 21 - 25 June 2010, pp.68
- VIII. **PAH PCB Concentrations in Mussels *Mytilus galloprovincialis* from Izmit Bay**
Ergül H. A. , Pekey B., Karademir A., Telli B., Terzi M., Ay Ü.
CIESM 39, Venice, Italy, 10 - 14 May 2010, vol.1, pp.67
- IX. **Karbon dioksit gazının aktif karbon üzerinde farklı sıcaklıklardaki adsorpsiyonu**
Karayünlü Bozbaş S., Kayıran Beyaz S., Weinberger B., Darkrim Lamari F., Ay Ü.
IV.Ulusal Hidrojen Enerjisi Kongresi ve Sergisi (Uluslararası Katılımlı), Kocaeli, Turkey, 15 - 16 October 2009, pp.379
- X. **Copper ion exchanged studies on synthesized zeolite NaLSX and NaA**
Karayünlü Bozbaş S., Kayıran Beyaz S., Darkrim Lamari F., Ay Ü.
6th Aegean Analytical Chemistry Days, Denizli, Turkey, 9 - 12 October 2008, pp.143
- XI. **Çinkonun bakır alfa benzoin oksimle flotasyon koşullarının incelenmesi**
Karayünlü Bozbaş S., Ay Ü.
Çevre Sorunları Sempozyumu Kocaeli-2008, Kocaeli, Turkey, 14 - 17 May 2008, pp.183
- XII. **Determination of microporous selectivity for CH₄,N₂,CO₂,H₂ mixture separation adsorption based process**
Karayünlü Bozbaş S., Weinberger B., Darkrim Lamari F., Beyaz Kayıran S., Ay Ü.
Proceedings International Hydrogen Energy Congress and Exhibition IHEC, İstanbul, Turkey, 13 - 15 July 2007, pp.216
- XIII. **Bakır (II) nin alfa benzoin oksimle flotasyon koşullarının incelenmesi**
Karayünlü Bozbaş S., Ay Ü.
III.Ulusal Analitik Kimya Kongresi, Çanakkale, Turkey, 05 July 2006, pp.56
- XIV. **Cobalt(III) dithiocarbamate as collector for flotation preconcentration of Tl(I) and Tl(III) for water analysis by ETAAS**
Bundalevska J., Koyuncu İ., Ay Ü., Cundeva K., Akçin G., Stafilov T.
4th AACD Congress, Aydın, Turkey, 29 September - 03 October 2004, pp.206-208
- XV. **İzmit yöresi ham süt örneklerinde grafit fırın atomik soğurma spektrometresi (GFAAS) yöntemiyle kurşun ve kadmiyum tayini**
Ay Ü., Öncel M. S. , Kerimak Öner M. N. , Karayünlü Bozbaş S.
II.Ulusal Analitik Kimya Kongresi, Malatya, Turkey, 02 September 2004, pp.100
- XVI. **Flotation method for simultaneously separation of heavy metals from water matrices and their AAS determination**
Ay Ü., Pavlovska G., Cundeva K., Stafilov T., Akçin G.
2nd Black Sea Basin Conference on Analytical Chemistry, İstanbul, Turkey, 14 - 17 September 2003, pp.198
- XVII. **AAS determination of heavy metals in traces in sea waters using flotation as a method for selection and preconcentration**
Ay Ü., Bundalevska J., Cundeva K., Stafilov T., Koyuncu İ., Akçin G.
2nd Black Sea Basin Conference on Analytical Chemistry, İstanbul, Turkey, 14 - 17 September 2003, pp.4
- XVIII. **Sulu ortamda eser elementlerin zenginleştirilmesi**
Koyuncu İ., Ay Ü., Akçin G.
XVII.Ulusal Kimya Kongresi, İstanbul, Turkey, 08 September 2003, pp.81
- XIX. **Studies on inter element interferences and interferences from some metal ions at the atomizer in the determination of arsenic and antimony by atomic absorption spectrometry with the hydride generation technique**
Ay Ü., Henden E.

Colloquium Spectroscopium Internationale XXXI, Ankara, Turkey, 5 - 10 September 1999, pp.32

XX. Çevre örneklerinde arsenik ve antimon tayini

Ay Ü., Henden E.

XIII.Ulusal Kimya Kongresi, Samsun, Turkey, 31 August 1999, pp.402

XXI. HG-AAS ayrılmasından sonra AAS ile kurşun tayini

Ay Ü., Henden E.

I.Ulusal Kromatografi Kongresi, Kırıkkale, Turkey, 16 June 1999, pp.43

XXII. Tribütil kalay tayini için GC-MECA yönteminin geliştirilmesi

Ay Ü., Henden E.

IX.Kimya ve Kimya Mühendisliği Sempozyumu, Trabzon, Turkey, 08 September 1993, pp.157

Supported Projects

AY Ü., Project Supported by Higher Education Institutions, Poliaraomatik bileşenlerle metil-beta-siklodekstrin arasında oluşan inklüzyon kompleksler üzerine Mg metalinin etkisi, 2019 - 2021

AY Ü., Project Supported by Higher Education Institutions, ANALİTİK KİMYA ARAŞTIRMA LABORATUVARI, 2019 - 2020

AY Ü., Project Supported by Higher Education Institutions, POLİAROMATİK HİDROKARBON ESASLI BİLEŞİKLERİN METİL-BETA-SİKLODEKSTRİN İLE KOMPLEKS OLUŞUMLARININ FLORESANS ÖZELLİKLERİNİN İNCELENMESİ, 2018 - 2019

AY Ü., Project Supported by Higher Education Institutions, POLİAROMATİK HİDROKARBON (PAH) BİLEŞİKLERİN METİL-BETA-SİKLODEKSTRİN İLE HOST-QUEST İNCLUSION KOMPLEKS OLUŞUMLARI VE OLUŞAN KOMPLEKSLERE AĞIR METAL ETKİSİNİN FLORESANS TEKNİĞİYLE İNCELENMESİ, 2017 - 2019

AY Ü., Project Supported by Higher Education Institutions, STEROİD İÇEREN BİYOBOZUNUR POLİMERLERİN FLORESANS ÇALIŞMALARI, 2016 - 2017

Ergül H. A. , Karademir A., Ay Ü., Project Supported by Higher Education Institutions, İzmit Körfezi Sediment ve Biyota Örneklerinde Çevresel Kirleticilerin Belirlenmesi, İzlenmesi ve Alıcı Ortam Kaynak Belirleme Modelinin Uygulanması, 2008 - 2011

Ay Ü., Ergül H. A. , Pekey B., Karademir A., TUBITAK Project, İzmit Körfezi Sediment ve Biyota Örneklerinde Çevresel Kirleticilerin Belirlenmesi, İzlenmesi ve Alıcı Ortam Kaynak Belirleme Modelinin Uygulanması , 2008 - 2010

Ay Ü., Koyuncu İ., Akçin G., Stafilov T., Cundeva K., TUBITAK Project, Development of new methods for heavy metals enrichments in water analysis, 2004 - 2008

Ay Ü., Project Supported by Higher Education Institutions, Ön deriştirme ve zenginleştirme metodu geliştirilerek sularda ağır metal tayini, 2003 - 2005

Ay Ü., Henden E., EU Supported Other Project, Long term control of tin pollution of the sea water in Aliağa, İZMİR, 1989 - 1992

Activities in Scientific Journals

journal of coastal life medicine, Committee Member, 2012 - Continues

Memberships / Tasks in Scientific Organizations

Kimyagerler Derneği, Member, 1998 - Continues, Turkey

Scientific Refereeing

JOURNAL OF HAZARDOUS MATERIALS, SCI Journal, January 2020

ENVIRONMENTAL MONITORING AND ASSESSMENT, SCI Journal, January 2020

JOURNAL OF FOOD MEASUREMENT AND CHARACTERIZATION, SCI Journal, January 2020
ENVIRONMENTAL MONITORING AND ASSESSMENT, SCI Journal, January 2019
JOURNAL OF FOOD MEASUREMENT AND CHARACTERIZATION, SCI Journal, January 2019
JOURNAL OF HAZARDOUS MATERIALS, SCI Journal, January 2018
JOURNAL OF FOOD MEASUREMENT AND CHARACTERIZATION, SCI Journal, January 2018
JOURNAL OF HAZARDOUS MATERIALS, SCI Journal, January 2017
ENVIRONMENTAL MONITORING AND ASSESSMENT, SCI Journal, January 2017
FOOD CONTROL, SCI Journal, January 2016
JOURNAL OF HAZARDOUS MATERIALS, SCI Journal, January 2016
ENVIRONMENTAL MONITORING AND ASSESSMENT, SCI Journal, January 2016
ENVIRONMENTAL MONITORING AND ASSESSMENT, SCI Journal, January 2015
ENVIRONMENTAL MONITORING AND ASSESSMENT, SCI Journal, January 2014
JOURNAL OF HAZARDOUS MATERIALS, SCI Journal, January 2013
ENVIRONMENTAL MONITORING AND ASSESSMENT, SCI Journal, January 2013
ENVIRONMENTAL MONITORING AND ASSESSMENT, SCI Journal, January 2012
ENVIRONMENTAL MONITORING AND ASSESSMENT, SCI Journal, January 2010

Citations

Total Citations (WOS):177

h-index (WOS):10

Invited Talks

Sınıfta Mezun Var, Conference, Ege Üniversitesi, Turkey, November 2021

Kariyer Günleri, Conference, Ege Üniversitesi, Turkey, May 2021

Scholarships

Burs, Scholarship for PhD, Doktora-Başarı, TÜBİTAK, 1993 - 1995

Artistic Activity

Ay Ü., Kocaeli Üniversitesi, Fen-Edebiyat Fakültesi THM Korosu, Turkish Folk Music, June 2014