



**TAGEM**  
R&D AND INNOVATION

BLACK SEA AGRICULTURAL RESEARCH  
INSTITUTE / SAMSUN

## DR. AYŞEGÜL EFENDIOĞLU ÇELİK

Chemical Engineer (PhD)

### EDUCATION

Assoc. prof

**Bachelor's Degree** Ondokuz Mayıs University  
2016-2019 Chemical Engineering

**PhD** Ondokuz Mayıs University  
2004-2010 Institute of Science

**MSc** Ondokuz Mayıs University  
2001-2004 Institute of Science

**Bachelor's Degree** Ondokuz Mayıs University  
1996-2000 Faculty of Arts and Sciences

**LANGUAGE** English (UDS: 51, YOKDIL:62,5)

### CAREER

2010- ..... - Researcher – Black Sea Agricultural Research  
Institute - SAMSUN

2008-2011 - Researcher - Ondokuz Mayıs University,  
Institute of Science, SAMSUN

### ABOUT ME

She was born in 1978 in Ordu. She graduated from OMU Faculty of Arts and Sciences, Department of Chemistry in 2000. She completed her master's degree in 2004 and her doctorate in 2010 at OMU Institute of Science and Technology, Department of Analytical Chemistry. Between 2016-2019, she completed her 2nd Bachelor's degree in OMU Engineering Chemical Engineering. Between 2006-2010, she worked as a Research Assistant in the Department of Analytical Chemistry at OMU Institute of Science and Technology.

She continues her studies at the Black Sea Agricultural Research Institute, Department of Energy Agriculture.

### CONTACT

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### ▪ **PROJECTS**

#### ▪ **Projects Conducted**

1. Determination of Some Trace Metals by AAS by Developing a Precipitation Method Based on Co-precipitation of a New Reactive Bi(III) 4-Benzylpiperidinedithiorbamate-OMÜ BAP-2006. (Researcher)
2. Preconcentration of Trace Metals with Some Complexizers Loaded on Amberlit XAD Resins and Determination by AAS-OMÜ BAP-2010 (Researcher)
3. Investigation of Use of Some Agricultural Residues in Bioethanol Production-TAGEM-2015. (Leader)
4. An Investigation of the Possibilities of Using Some Agricultural Residues as an Alternative Energy Source, which pose a problem for our producers and factories-TAGEM-2016. (Researcher)
5. Adaptation of False Flax (*Camelina sativa* L. (Crantz)) and Determination of Biofuel Quality – TAGEM –2014-2016. (Researcher)
6. Determination of Bio-Ethanol Production Potentials of Different Sweet Sorghum (*Sorghum Bicolor* Var. *Saccharatum* (L.) Mohlenbr.) Genotypes in Çukurova and GAP Regions-TÜBİTAK 1003-2018. (Researcher)
7. Determination of Some Agricultural Properties, Bioethanol and Biomass Yields of Second Crop Sweet Sorghum [*Sorghum bicolor* (L.) Moench] in Şanlıurfa Conditions- TAGEM-2019. (Researcher)
8. Investigation of the Utilization Opportunities of Forest Wastes as Pellets-General Directorate of Forestry-2019. (Researcher)
9. Determination of Briquetting Parameters of Some Agricultural Wastes in Screw and Hydraulic Type Briquette Machines-TAGEM-2019. (Researcher)
10. Development of Genotypes with Low THC Ratio from Cannabis (*Cannabis Saiva* ssp *Sativa*) Populations-TÜBİTAK 1001-2021. (Researcher)

#### ▪ **Ongoing Projects**

1. Determination of the Potentials of Catencik and Sweet Sorghum in the Evaluation of Salty and Arid Areas-TAGEM-Continued. (Researcher)
2. Towards Sustainable Water Use in Paddy-Based Agricultural Ecosystems of the Mediterranean Region-PRIMA-TÜBİTAK 1001-Continues. (Researcher)
3. Developing High Yielding Variety(s) in Inbred Rapeseed Lines with High General and Special Combination Capability and Bringing them to the Country's Economy-TÜBİTAK 1003-Continues. (Researcher)
4. Investigation of the Evaluation Opportunities of Forest Residues and Hazelnut Crust in Pellet Production-General Directorate of Forestry-Continues. (Researcher)
5. Investigation of the Use of Camelina Plant (*Camelina sativa*) as a Raw Material Source in the Production of Green Diesel, Bioethanol, Pellet and Activated Coal-TAGEM-Continues. (Leader)
6. The Effect of Applications of Different Nitrogen Doses on Fiber and Seed Yield and Some Quality Traits in Domestic Cannabis Varieties-TAGEM-Continues. (Researcher)
7. Determination of Cultivar Candidates Suitable for Fiber and Seed Production from Low Thc Cannabis Genotypes (*Cannabis sativa* ssp *vulgaris*) Developed by Mass Selection Method and Creation of New Genetic Combinations-TÜBİTAK 1001-Continues. (Researcher)



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### ▪ PUBLICATIONS

#### ▪ INTERNATIONAL ARTICLES AND PAPERS

##### ▪ Articles Published in International Journals

1. Y. Asci, **Efendioglu, A.**, Bati, B., 2012. Determination of Nickel, Copper and Zinc in Water Samples After Cloud Point Extraction Using Ammonium O,O-Dicyclohexyldithiophosphate and Triton X-114 by Flame Atomic Absorption Spectrometry, Asian Journal of Chemistry.
2. **Efendioglu, A.**, Y. Asci, M., Bati, B., 2010. Preconcentration of Cu(II), Cd(II) and Pb(II) on Amberlite XAD-4 Resin Functionalized with N,N '-Bis(o-vanillinidene)ethylenediamine and Their Determination by FAAS in Water Samples, Analytical sciences.
3. Yagan Asci, M., **Efendioglu, A.**, Bati, B., 2008. Solid phase extraction of Cadmium in Edible Oils Using Zinc Piperazinedithiocarbamate and Its Determination by Flame Atomic Absorption Spectrometry, Turkish Journal of Chemistry.
4. **Efendioglu, A.**, Yagan, M., Bati, B., 2007. Bi(III)4-methylpiperidinedithiocarbamate Coprecipitation Procedure for Separation Pre-concentration of Trace Metal Ions in Water Samples by Flame Atomic Absorption Spectrometric Determination, Journal of Hazardous Materials.

##### ▪ International Papers, Seminars, etc.

1. Dok, M., Gizlenci, Ş., Acar, M., **Efendioglu Çelik, A.** ve Erdoğan, M., 2020. Evaluation of Rice Straw and Hulls as Solid Fuel. International GAP Renewable Energy and Energy Efficiency Congress Proceedings Book, Page:20, Şanlıurfa/TURKEY.
2. Aytaç, S., Arslanoğlu, Ş. F., Ayan, A. K., Gizlenci, Ş., **Efendioglu, A.**, Aksoy, D., Paslı, R., 2019. THC and CBD Contents of Turkey Cannabis Genotypes, 2nd International May 19 Innovative Scientific Approaches Congress, 27-29 December 2019, Samsun-TURKEY.
3. Dok, M., Acar, M., **Çelik, E. A.**, Atagün, G., Akbaş, U., 2019. Briquetting of Corn Straw as a Renewable Energy Source and Determination of the Physical Properties of Briquettes, 1st International Congress on Biosystems Engineering (ICOBEN2019), 24-27 September 2019, Hatay, TURKEY.
4. Aytaç, S., Arslanoğlu, Ş. F., Ayan, A. K., Gizlenci, Ş., **Efendioglu, A.**, 2019. CBD and THC Content of Cannabis Genotypes of Turkey. World Conference on Sustainable Life Sciences (WOCOLS 2019), June 30- July 07, 2019, Budapest, HUNGARY.
5. Karayel, R., Acar, M., **Çelik, E. A.**, 2018. Genotype x Environment Interactions and Stability Analysis of Some Properties In The Camelina Plant (Camelina sativa L. (Crantz)). International Agricultural Science Congress, Poster Presentations, 09-12 May 2018, Van / TÜRKİYE, 235 p.
6. Aksoy, M., **Çelik, A.**, Dok, M., Aydın, K. & Yucel, C. 2018. Quality Properties of Pellets Produced from Bagasses of Different Sweet Sorghum (Sorghum bicolor var. saccharatum (L.) Mohlenbr.) Genotypes, IREC 2018- International Renewable Energy Congress, TUNUS.
7. Dok, M., **Çelik, A.**, Akbaş, U., 2017. Examination of Fuel Characteristics of Chestnut Burr. 6.th International Chestnut Symposium, October, 9-13, 2017- Samsun/TURKEY. P.47, Poster.



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8. Yağan Aşçı, M., **Efendioğlu A.** and Batı, B., 2008. Separation and Preconcentration Procedure Using Cloud Point Extraction for Zinc Determination by Flame Atomic Absorption Spectrometry, 6th Aegean Analytical Chemistry Days (AACD).
9. Türk Çulha, S., Bat, L., Çulha, M., **Efendioğlu, A.**, Andaç, M., Batı, B., 2007. Heavy Metals Levels in Some Fishes and Molluscs from Sinop Peninsula of The Southern Black Sea., 38th CIESM Congress.

### ▪ NATIONAL ARTICLES AND PAPERS

#### ▪ Articles Published in National Journals

1. Dok, M., **E. Çelik, A.**, Aksoy, M., Yücel, C., 2021. Determination of Combustion Properties of Pellets Obtained from Sweet Sorghum Pulp Grown in Çukurova Conditions, ISPEC Journal of Agricultural Sciences, 5(4): 820-832.
2. Dok, M., **E. Çelik, A.**, Aksoy, M., Yücel, C., 2021. Determination of Some Physical Properties of Pellets Obtained from Sweet Sorghum Pulp Grown in Çukurova Conditions, MAS Journal of Applied Sciences 6 (2), 284-295.
3. Dok, M., Adıyaman, C., Erbil, Hatipoğlu, H., **E., Efendioğlu, A.**, Aksoy, M., Acar, M., 2021. Determination of fuel properties of pellets obtained from the stalks of some sweet sorghum [*Sorghum bicolor* (L.) Moench] cultivars grown as a second crop under Şanlıurfa conditions, MKU. tar. know Journal. Volume: 26, Issue: 3, Page: 709-719, DOI: 10.37908/mkutbd.974979.
4. Erbil, E., Adıyaman, C., **E. Çelik, A.**, Hatipoğlu, H., Aksoy, M., Acar, M., Dok, M., 2020. Determination of Some Agricultural Properties of Second Product Sweet Sorghum [*Sorghum bicolor* (L.) Moench] in Sanliurfa Conditions, International Journal of Scientific and Technological Research, ISSN 2422-8702 (Online), DOI: 10.7176/JSTR/6-07-03, Vol.6, No.7.
5. Adıyaman, C., Erbil, **E., Efendioğlu, A.**, Hatipoğlu, H., Aksoy, M., Acar, M., Dok, M. 2020. Determination of Some Agricultural and Technological Properties of Second Crop Sweet Sorghum [*Sorghum bicolor* (L.) Moench] in Şanlıurfa Conditions. Journal of the Institute of Science and Technology, 10 (3) , 125-132.
6. Zengin, Y., **Çelik, A. E.**, Dok, M., Çolak, S., 2020. Determination of fuel properties of wood pellet's made from poplar wood residues, Journal of Artvin Coruh University Faculty of Forestry, Vol.21 No.1 pp.29-36.
7. Zengin, Y., **E. Çelik, A.**, Dok, M., Çolak, S., Kargidan, A. İ., Çakır, A., Semercioğlu, A., 2020. An Investigation of the Possibilities of Using Forest Wastes as Pellets, Journal of Forestry Research, 7:2, 10-16.
8. Dok, M., Acar, M., **E. Çelik, A.**, Atagün, G., Akbaş, U., 2019. Briquetting of Corn Stalk as a Renewable Energy Source and Determination of the Physical Properties of Briquettes, Mustafa Kemal University Journal of Agricultural Sciences, Volume 24, Pages: 61-70.

#### ▪ National Papers, Seminars, etc.

1. Dok, M., Acar, M., **E. Çelik, A.**, Atagün, G., Akbaş U., 2018. Comparison of Fuel Properties of Briquettes Obtained from Kiwi Pruning Residues of Different Particle Sizes, 31st National Mechanization and Energy Congress, 05-07 September, Bursa, Presentation.
2. Dok, M., Acar, M., **E. Çelik, A.**, Atagün, G., Akbaş U., 2018. Investigation of Peach Pruning Residues as a Renewable Energy Source. National Mechanization and Energy Congress, 05-07 September, Bursa, Poster Presentation.



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3. Aksoy, M., **E. Çelik, A.**, Dok, M., Gültekin, R., Aydın, K., Yücel, C., 2017. Determination of Bioethanol Conversion Efficiency, Pellet Production from Pulp, Fuel Analysis of Bioethanol and Meal, 1st Year Study Findings. September 26, 2017, Şanlıurfa/Turkey, Poster.
4. Aksoy, M., **E. Çelik, A.**, Dok, M., Aydın, K., Yücel, C., 2017. Determination of Bioethanol Conversion Efficiency, Pellet Production from Pulp, Fuel Analysis of Bioethanol and Pulp, 2nd Year Study Findings. September 26, 2017, Şanlıurfa/Turkey, Poster.
5. Karayel, R., Acar, M., Gizlenci, Ş., **Çelik, A.**, 2017. Some Agronomic Characteristics of Camelina (*Camelina sativa* L. (Crantz)) Plant in the Central Black Sea Region. Turkey 12th Field Crops Congress 12-15 September 2017 Kahramanmaraş, Proceedings Electronic Congress Book, pp: 112-116.
6. Aksoy, M., **E. Çelik, A.**, Dok, M., 2016. Investigation of the Usability of Pomace as a Biofuel and Determination of its Quality Characteristics-Poster, 2nd National Biofuels Symposium 27-30 September 2016-Samsun.
7. Erdoğan, M., Gizlenci, Ş., Acar, M., Dok, M., **E. Çelik, A.**, 2016. Studies on Briquette Production from Some Agricultural Wastes. Poster Presentation, 2nd National Biofuels Symposium 27-30 September 2016-Samsun.
8. Acar, M., Gizlenci, Ş., Dok, M., Erdoğan, M., **E. Çelik, A.**, 2016. Evaluation of Some Agricultural Waste-Residues as Biomass Source. Presentation, 2nd National Biofuels Symposium 27-30 September 2016-Samsun.
9. Dok, M., Gizlenci, Ş., Acar, M., **E. Çelik, A.**, Erdoğan, M., 2016. Determination of the Most Appropriate Mixing Ratios for Pellet Production of Some Agricultural Wastes with High Energy Value. Presentation, 2nd National Biofuels Symposium 27-30 September 2016-Samsun.
10. Karayel, R., Acar, M., Gizlenci, Ş., **Çelik, A.**, 2016. Adaptation of Camelina (*Camelina Sativa* L. (Crantz)) Plant. Presentation, 2nd National Biofuels Symposium 27-30 September 2016-Samsun.
11. Dok, M., Gizlenci, Ş., Acar, M., **Efendioğlu, A.**, Erdoğan, M., 2015. Evaluation of Rice Straw and Hulls as Biomass. Konuralp Rice Workshop, Oral Presentation, 14-16 December 2015, Düzce.
12. Karayel R., Acar M., Gizlenci Ş., **Çelik A.**, 2015. Some Agronomic Characteristics of Camelina (*Camelina sativa* (L.) Crantz) Population. YABITED II. Vegetable Oil Congress, Poster Presentation, 7-9 May 2015 Tekirdağ, 127.
13. **Efendioğlu Çelik, A.**, Aksoy, M., Acar, M., Gizlenci, Ş., 2013. Optimization of Safflower Oil Methyl Ester Synthesis by Transesterification and Determination of Important Fuel Properties. 3rd National Workshop on Energy Agriculture and Biofuels.
14. **Efendioğlu Çelik, A.**, Aksoy, M., Karayel, K., Acar, M., 2013. Bioethanol Production from Waste Potatoes, IX. National Clean Energy Symposium.
15. Aksoy, M., **Efendioğlu Çelik, A.**, Atagün, G., Karayel, K., 2012. Production of Biodiesel from Some Vegetable Oils and Determination of Important Fuel Properties. Energy Agriculture and Biofuels 2nd National Workshop, Oral Presentation, 24-25 May, Tokat, Turkey.
16. Yağan Aşçı, M., **Efendioğlu A.** ve Batı, B., 2008. Concentration of Cu(II) by Cloud Point Extraction and Determination by Flame Atomic Absorption Spectroscopy (FAAS), IV. National Analytical Chemistry Congress.
17. Yağan Aşçı, M., **Efendioğlu A.** ve Batı, B., 2008. Enrichment of Ni(II) by Cloud Point Extraction and Determination by Flame Atomic Absorption Spectroscopy (FAAS). XXII. National Chemistry Congress, Poster Presentation, Eastern Mediterranean University, Famagusta-Cyprus, 6-10 October, AK-P068.



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18. **Efendioğlu, A.**, Yağan Aşçı M., Batı, B., 2008. Amberlit XAD-4-o-VEDH<sub>2</sub> Selat Reçinesinin Sentezi ve Metal Zenginleştirme Çalışmalarında Kullanımı. XXII. Ulusal Kimya Kongresi, Poster Bildiri, Doğu Akdeniz Üniversitesi, Mağusa-Kıbrıs, 6-10 Ekim, AK-P012.
19. **Efendioğlu, A.**, 2005. Chelating Resins in Trace Element Analysis (Ph.D. Seminar, Omü-Sciences Institute, Department of Analytical Chemistry, Samsun).
20. **Efendioğlu, A.**, 2003. Sample Preparation Methods in Atomic Absorption Spectrometric Analysis (Master's Seminar, Omü-Institute of Science, Analytical Chemistry Department, Samsun).

### ▪ **OTHER PUBLICATIONS**

#### ▪ **Ph.D. Thesis, Master Thesis, Reports, Books etc.**

1. Co-precipitation of Some Metal Ions with Bi(III) 4-Methyl Piperidine Dithiocarbamate and Determination by AAS (Master Thesis, Omu-Sciences Institute, Department of Analytical Chemistry, Samsun-2004).
2. Preconcentration of Trace Metals with Some Complexizers Loaded on Amberlit XAD Resins and Determination by AAS (PhD Thesis-OMÜ-Institute of Science, Department of Analytical Chemistry, Samsun-2010).

#### ▪ **Membership, Training, Course, Meeting, Congress, Symposium and Other Activities**