

## **Prof. MUSTAFA TOKYAY**

### **Personal Information**

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### **Education Information**

Doctorate, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, Turkey 1980 - 1987

Postgraduate, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, Turkey 1978 - 1980

Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, Turkey 1972 - 1978

### **Dissertations**

Doctorate, Effects of a high-calcium and a low-calcium fly ash on the properties of portland cement fly ash pastes and mortars., Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 1987

Postgraduate, Determination of the tensile fatigue properties of plain concrete by indirect tension tests, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 1980

### **Academic Titles / Tasks**

Professor, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 1980 - Continues

### **Academic and Administrative Experience**

Middle East Technical University, Faculty of Engineering, 2003 - 2006

Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 1999 - 2003

### **Advising Theses**

TOKYAY M., Hydration behavior and strength development of mineral admixture incorporated calcium aluminate cements, Postgraduate, K.CAN(Student), 2018

TOKYAY M., Maturity and equivalent age functions of mineral admixtures incorporated mortars, Postgraduate, M.ATASEVER(Student), 2017

TOKYAY M., Low-energy alinite cement production by using soda waste sludge, Postgraduate, G.OZAN(Student), 2016

TOKYAY M., Influence of mineral admixture type and amount on rheological properties of mortars, Doctorate, M.IDREES(Student), 2016

ERDOĞAN S. T., TOKYAY M., Effect of particle size on heat of hydration of pozzolan incorporated cements /, Postgraduate, M.KEMAL(Student), 2014

YAMAN İ. Ö., TOKYAY M., Comparison of test methods on the compressive strength of fly ash blended cements /, Postgraduate, H.TUNÇ(Student), 2014

TOKYAY M., Comparison of test methods on the compressive strength of slag and natural pozzolan cements, Postgraduate, A.ÜSAME(Student), 2014

TOKYAY M., Pretreatment of peanut shells for co-production of glucose and concrete admixture, Postgraduate, E.TATLI(Student), 2013

ERDOĞAN S. T., TOKYAY M., Early heat evolution of different – sized portland cements incorporating ground granulated blast furnace slag, Postgraduate, C.ÇETİN(Student), 2013

ÖZTÜRK A., TOKYAY M., A study on the utilization of waste cement-bonded wood particle board as a raw material and a secondary fuel in cement manufacturing, Postgraduate, M.YILMAZ(Student), 2012

ERDOĞAN S. T., TOKYAY M., Early heat evolution in natural pozzolan-incorporated cement hydration, Postgraduate, D.ÖVER(Student), 2012

TOKYAY M., Effect of trass, granulated blast furnace slag and fly ash on delayed ettringite formation, Postgraduate, S.TOPBAŞ(Student), 2010

TOKYAY M., Effectiveness of set accelerating admixtures with different cement types, Postgraduate, D.TUĞBA(Student), 2009

TOKYAY M., Effects of separate and intergrinding on some properties of portland composite cements, Postgraduate, S.SOYLUOĞLU(Student), 2009

YAMAN İ. Ö., TOKYAY M., Monitoring the development of properties in fresh cement paste and mortar by ultrasonic waves, Doctorate, Ö.KASAP(Student), 2009

YAMAN İ. Ö., TOKYAY M., Modelling the fresh properties of self compacting concrete utilizing statistical design of experiment techniques, Postgraduate, L.EROĞLU(Student), 2007

YAMAN İ. Ö., TOKYAY M., Various durability aspects of slurry infiltrated fiber concrete, Doctorate, A.MOHAMED(Student), 2007

TOKYAY M., SELÇUK N., Utilization of fly ash from fluidized bed combustion of a Turkish lignite in production of blended cements, Postgraduate, M.KÜRKÇÜ(Student), 2006

TOKYAY M., Self-compacting concrete with high volumes of fly ash, Doctorate, M.ŞAHMARAN(Student), 2006

TOKYAY M., Temperature effect on calcium aluminate cement based composite binders, Doctorate, Ö.KIRCA(Student), 2006

TOKYAY M., Determination of mechanical properties of hybrid fiber reinforced concrete, Postgraduate, A.EREN(Student), 2004

TOKYAY M., Çimentolu sistemlerin olgunluğu, Doctorate, A.YILMAZ(Student), 2004

TOKYAY M., Hydration and properties of limestone incorporated cementitious systems, Doctorate, K.ERDOĞDU(Student), 2002

TOKYAY M., Effect of cement type on concrete maturity, Postgraduate, Ö.KASAP(Student), 2002

TOKYAY M., TURANLI L., Effects of cement type on concrete maturity, Postgraduate, Ö.Kasap(Student), 2002

TOKYAY M., Sulfate resistance of cementitious systems with mineral additives, Doctorate, F.TUNCER(Student), 2002

TOKYAY M., Evaluation of concrete strength of existing structures by-non-destructive and core tests, Postgraduate, Ü.AKKAYA(Student), 2001

TOKYAY M., The Effect of aggregate packing on strength of concrete, Postgraduate, T.BARIN(Student), 2000

TOKYAY M., The Effect of cement types on the corrosion of concrete reinforcement, Postgraduate, A.TUGAN(Student), 1999

TOKYAY M., Statistical evaluation of concrete rebars from eight cities in Turkey, Postgraduate, T.Kutluay(Student), 1999

TOKYAY M., Statistical evaluation of concrete rebars from eight cities in Turkey, Postgraduate, T.KUTLUAY(Student), 1999

TOKYAY M., Effects of some Turkish fly ashes on the properties of portland cement-fly ash pastes and mortars, Postgraduate, B.TUNÇBİLEK(Student), 1998

TOKYAY M., Pressed lightweight masonry units from expanded ferrochromium slag, Postgraduate, S.AZANBAEVA(Student), 1998

TOKYAY M., Effects of clinker composition on the properties of pozzolonic cements., Postgraduate, A.YILMAZ(Student), 1998

TOKYAY M., Theoretical and experimental investigations on the between two materials, Doctorate, S.SABRI(Student), 1997

TOKYAY M., An experimental investigation on fly-ash FGD gypsum-lime based bricks, Postgraduate, Ö.Ariöz(Student), 1997

TOKYAY M., An Experimental investigation on fly ash-Fgd gypsum-lime based bricks, Postgraduate, Ö.ARIÖZ(Student), 1997

TOKYAY M., Theoretical and experimental investigation on the bond between two materials, Doctorate, S.Eddin(Student), 1997

TOKYAY M., Diatomitlerin çimentolu sistemlerde puzolanik malzeme olarak kullanılabilirliği, Doctorate, H.YILMAZ(Student), 1996

TOKYAY M., Effects of pozzolanic additions on grindability and some mechanical properties of pozzolanic cements of different fineness values, Postgraduate, K.Erdogdu(Student), 1996

TOKYAY M., Effects of admixtures on mortar shrinkage under different curing conditions, Postgraduate, T.BİRİNCİOĞLU(Student), 1996

TOKYAY M., Effects of pozzolonic additions on grindability and some mechanical properties of pozzolonic cements of different fineness valves, Postgraduate, K.ERDOĞDU(Student), 1996

TOKYAY M., Effectiveness of chemical admixtures in relation with cement type, Postgraduate, B.BERK(Student), 1995

TOKYAY M., Specimen size and shape effect on compressive strength of high-strength concrete, Postgraduate, M.ÖZDEMİR(Student), 1994

TOKYAY M., Accelerated curing in high strength concrete, Postgraduate, A.KIZILKAYA(Student), 1994

TOKYAY M., Structural lightweight concrete produced with pumice and leçelik aggregates, Postgraduate, O.ALP(Student), 1994

TOKYAY M., Structural lightweight concrete produced with pumice and Leçelik aggregates, Postgraduate, O.Alp(Student), 1994

TOKYAY M., Accelerated curing in high strength concrete, Postgraduate, A.Kızılkaya(Student), 1994

TOKYAY M., Effects of the type of aggregate on the mechanical properties of high strenght concrete, Postgraduate, M.ÇETİN(Student), 1993

TOKYAY M., Effects of the type of aggregate on the mechanical properties of high strength concrete., Postgraduate, M.Çetin(Student), 1993

TOKYAY M., Silica fume in high strength concrete, Postgraduate, Y.KAYA(Student), 1992

TOKYAY M., Use of silicoferrochromium slag and ferrochromium condensed silica fume as partial replacement of cement, Postgraduate, O.ÜNAL(Student), 1991

TOKYAY M., Effect of condensed silica fume on some mortar properties, Postgraduate, Y.Sarkaya(Student), 1991

TOKYAY M., Effects of condensed silica fume on some mortar properties, Postgraduate, Y.SARIKAYA(Student), 1991

TOKYAY M., The Effects of a plasticizing and a superplasticizing agents on water-cement ratio and compressive strength of concretes, Postgraduate, A.DAŞCI(Student), 1990

## **Published journal articles indexed by SCI, SSCI, and AHCI**

- I. **Long-term mechanical performance of fly ash-incorporated reactive magnesia cements**  
Ardoga M. K., YAMAN İ. Ö., TOKYAY M.  
ADVANCES IN CEMENT RESEARCH, 2024 (SCI-Expanded)
- II. **Effect of particle size on early heat evolution of interground natural pozzolan blended cements**  
Ardoğa M. K., Erdoğan S. T., Tokyay M.  
CONSTRUCTION AND BUILDING MATERIALS, vol.206, pp.210-218, 2019 (SCI-Expanded)
- III. **Extension of the chemical index model for estimating Alkali-Silica reaction mitigation efficiency to slags and natural pozzolans**  
Mahyar M., Erdoğan S. T., Tokyay M.  
CONSTRUCTION AND BUILDING MATERIALS, vol.179, pp.587-597, 2018 (SCI-Expanded)
- IV. **Mechanical Properties of Cement Mortar Containing Heat-Treated Boron Derivative Waste at Elevated Temperatures**  
KAMAN D. Ö., Koroglu L., AYAS E., TOKYAY M., GÜNEY Y.

JOURNAL OF MATERIALS IN CIVIL ENGINEERING, vol.30, no.6, 2018 (SCI-Expanded)

- V. **Hydration of alinite cement produced from soda waste sludge**  
Ucal G. O., Mahyar M., TOKYAY M.  
CONSTRUCTION AND BUILDING MATERIALS, vol.164, pp.178-184, 2018 (SCI-Expanded)
- VI. **Effect of particle size and slag content on the early hydration of interground blended cements**  
Cetin C., ERDOĞAN S. T., TOKYAY M.  
CEMENT & CONCRETE COMPOSITES, vol.67, pp.39-49, 2016 (SCI-Expanded)
- VII. **Cement production by cement-bonded wood particleboard wastes**  
Yilmaz M., TOKYAY M., YAMAN İ. Ö.  
ADVANCES IN CEMENT RESEARCH, vol.28, no.4, pp.233-240, 2016 (SCI-Expanded)
- VIII. **Effect of Pozzolan Content and Fineness on Early Hydration of Interground Blended Cements**  
ERDOĞAN S. T., Over D., TOKYAY M.  
JOURNAL OF ADVANCED CONCRETE TECHNOLOGY, vol.12, no.3, pp.101-110, 2014 (SCI-Expanded)
- IX. **Properties of alinite cement produced by using soda sludge**  
Kesim A. G., TOKYAY M., YAMAN İ. Ö., ÖZTÜRK A.  
ADVANCES IN CEMENT RESEARCH, vol.25, no.2, pp.104-111, 2013 (SCI-Expanded)
- X. **Compressive strength development of calcium aluminate cement-GGBFS blends**  
Kirca O., YAMAN İ. Ö., TOKYAY M.  
CEMENT & CONCRETE COMPOSITES, vol.35, no.1, pp.163-170, 2013 (SCI-Expanded)
- XI. **Genetic expression programming for prediction of heat of hydration of the blended cements**  
BİNİCİ H., KAYADELEN C., ÇAĞATAY İ. H., TOKYAY M., KAPLAN H.  
SCIENTIFIC RESEARCH AND ESSAYS, vol.4, no.3, pp.141-151, 2009 (SCI-Expanded)
- XII. **Transport and mechanical properties of self consolidating concrete with high volume fly ash**  
Sahmaran M., YAMAN İ. Ö., TOKYAY M.  
CEMENT & CONCRETE COMPOSITES, vol.31, no.2, pp.99-106, 2009 (SCI-Expanded)
- XIII. **The effect of particle size distribution on the properties of blended cements incorporating GGBFS and natural pozzolan (NP)**  
Binici H., Aksogan O., Cagatay I. H., Tokyay M., Emsen E.  
POWDER TECHNOLOGY, vol.177, no.3, pp.140-147, 2007 (SCI-Expanded)
- XIV. **Development of high-volume low-lime and high-lime fly-ash-incorporated self-consolidating concrete**  
Sahmaran M., Yaman O., Tokyay M.  
MAGAZINE OF CONCRETE RESEARCH, vol.59, no.2, pp.97-106, 2007 (SCI-Expanded)
- XV. **Use of perlite as a pozzolanic addition in producing blended cements**  
Erdem T. K., Meral Ç., Tokyay M., Erdogan T. Y.  
CEMENT & CONCRETE COMPOSITES, vol.29, no.1, pp.13-21, 2007 (SCI-Expanded)
- XVI. **The early heat of hydration of blended cements incorporating GGBFS and ground basaltic pumice (GBP)**  
BİNİCİ H., ÇAĞATAY İ. H., TOKYAY M., KÖSE M. M.  
INTERNATIONAL JOURNAL OF PHYSICAL SCIENCES, vol.1, no.3, pp.112-120, 2006 (SCI-Expanded)
- XVII. **Assessing the ITZ microcracking via scanning electron microscope and its effect on the failure behavior of concrete**  
Akcaoglu R., Tokyay M., Celik T.  
CEMENT AND CONCRETE RESEARCH, vol.35, no.2, pp.358-363, 2005 (SCI-Expanded)
- XVIII. **Effect of coarse aggregate size and matrix quality on ITZ and failure behavior of concrete under uniaxial compression**  
Akcaoglu T., Tokyay M., Celik T.  
CEMENT & CONCRETE COMPOSITES, vol.26, no.6, pp.633-638, 2004 (SCI-Expanded)
- XIX. **Effect of coarse aggregate size on interfacial cracking under uniaxial compression**  
Akcaoglu T., Tokyay M., Celik T.  
MATERIALS LETTERS, vol.57, no.4, pp.828-833, 2002 (SCI-Expanded)
- XX. **Comparison of intergrinding and separate grinding for the production of natural pozzolan and**

### **GBFS-incorporated blended cements**

Erdogdu K., Tokyay M., Turker P.

CEMENT AND CONCRETE RESEARCH, vol.29, no.5, pp.743-746, 1999 (SCI-Expanded)

**XXI. Effect of chemical composition of clinker on grinding energy requirement**

Tokyay M.

CEMENT AND CONCRETE RESEARCH, vol.29, no.4, pp.531-535, 1999 (SCI-Expanded)

**XXII. Specimen shape and size effect on the compressive strength of higher strength concrete**

Tokyay M., Ozdemir M.

CEMENT AND CONCRETE RESEARCH, vol.27, no.8, pp.1281-1289, 1997 (SCI-Expanded)

**XXIII. EFFECTS OF 3 TURKISH FLY ASHES ON THE HEAT OF HYDRATION OF PC-FA PASTES**

TOKYAY M.

CEMENT AND CONCRETE RESEARCH, vol.18, no.6, pp.957-960, 1988 (SCI-Expanded)

### **Articles Published in Other Journals**

**I. Effects of experimental parameters in monitoring the hydration of cement mortars by ultrasonic testing**

Keskin Ö. K., YAMAN İ. Ö., Tokyay M.

RILEM Bookseries, vol.6, pp.437-443, 2012 (Scopus)

**II. Mühendislik Eğitimi ve Akreditasyonda Uluslararası Yaklaşımlar**

Yaman Y., Tokyay M., Gümrah F.

ODTÜlü Mezunlarla İletişim Dergisi, no.36, pp.38-39, 2005 (Non Peer-Reviewed Journal)

### **Refereed Congress / Symposium Publications in Proceedings**

**I. Low-energy alinite cement from soda sludge waste**

Uçal G. O., Mahyar M., Tokyay M., Yaman İ. Ö.

10th ACI/RILEM International Conference on Cementitious Materials and Alternative Binders for Sustainable Concrete, ICCM 2017, Montreal, Canada, 2 - 04 October 2017, pp.24-31

**II. Sürdürülebilir Çimento Üretimi Çimentolu Yonga Levha Atıklarının Çimento Üretiminde Kullanılması**

YILMAZ M., TOKYAY M., YAMAN İ. Ö.

9. Ulusal Beton Kongresi, Turkey, 16 - 18 April 2015

**III. Development of Inorganic Silicone Polymers from Silica Fume**

ERDOĞAN S. T., TOKYAY M.

7th Asian Symposium on Polymers in Concrete (ASPIC 2012), İstanbul, Turkey, 3 - 05 October 2012, pp.709-716

**IV. Effect of ground perlite incorporation on the performance of blended cements**

Erdem T. K., Meral C., TOKYAY M., ERDOĞAN T. Y.

International Conference on Sustainable Construction Materials and Technologies, Coventry, United Kingdom, 11 - 13 June 2007, pp.279-285

**V. Mechanical properties of hybrid fiber reinforced concrete**

Yurtseven A. E., YAMAN İ. Ö., TOKYAY M.

16th European Conference of Fracture, Alexandroupoli, Greece, 3 - 07 July 2006, pp.207-208

### **Supported Projects**

DUMAN A., MERİÇ NURSAL I., EROL F., TOKYAY M., KARAHAN DAĞ F., Project Supported by Higher Education Institutions, YIPRANMIŞ DOLOMİT TAŞININ NANO TANELİ SOLÜSYONLARLA KENDİ YAPISINA UYGUN SAĞLAMLAŞTIRILMASI, 2018 - 2020

TOKYAY M., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ,  
2014 - 2015

## **Metrics**

Publication: 30  
Citation (WoS): 972  
Citation (Scopus): 972  
H-Index (WoS): 15  
H-Index (Scopus): 14

## **Non Academic Experience**

O.D.T.Ü.  
Türkiye Çimento Müstahsilleri Birliği (TÇMB)  
O.D.T.Ü.  
Türkiye Çimento ve Toprak Sanayi A.Ş. (ÇİTOSAN)  
Doğu Akdeniz Üniversitesi  
O.D.T.Ü.  
Dundee University  
O.D.T.Ü.  
O.D.T.Ü.  
Tarım Satış Kooperatifleri Merkez Birliği (TARKO)