ISSUED (*GRANTED*) PATENTS

A. Cuneyt Tas, *Ph.D.*

1. "Carbonatable calcium silicate-based cements and concretes having mineral additives, and methods thereof," **US Patent** No. **12,098,104** (September 24, 2024), Inventors: A. C. Tas *et al.*, *Assignee*: Solidia Technologies, Inc.

2. "Mitigation of corrosion in carbonated concrete based on low calcium silicate cement," **US Patent** No. **12,012,365** (June 18, 2024), Inventors: A. C. Tas *et al.*, Assignee: Solidia Technologies, Inc.

3. "Compositions and method to improve the aesthetics of calcium silicate-based cements and concretes," **US Patent** No. **12,012,362** (June 18, 2024), Inventors: A. C. Tas *et al.*, Assignee: Solidia Technologies, Inc.

4. "Multi-step curing of green bodies," **Chinese Patent** No. CN-**112654592**-B (February 20, 2024), Sole inventor: A. C. Tas, Assignee: Solidia Technologies, Inc.

5. "Mineral additives and production of lightweight composite materials from carbonatable calcium silicate," **US Patent** No. **11,767,264** (September 26, 2023), Sole inventor: A. C. Tas, Assignee: Solidia Technologies, Inc.

6. "Synthetic Pozzolans," **US Patent** No. **11,731,906** (August 22, 2023) Inventors: A. C. Tas *et al.*, Assignee: Solidia Technologies, Inc.

7. "Compositions and method to improve the strength development of calcium silicate-based cements and concretes," **US Patent** No. **11,667,573** (June 6, 2023) Inventors: A. C. Tas *et al.*, Assignee: Solidia Technologies, Inc.

8. "Compositions and method to improve the durability of calcium silicate-based cements and concretes," **US Patent** No. **11,518,715** (December 6, 2022) Inventors: A. C. Tas *et al.*, Assignee: Solidia Technologies, Inc.

9. "Carbonatable calcium silicate-based cements and concretes having mineral additives, and methods thereof," **US Patent** No: **11,352,297** (June 7, 2022) Inventors: A. C. Tas *et al.*, Assignee: Solidia Technologies, Inc.

10. "Synthetic Pozzolans," **US Patent** No. **10,662,116** (May 26, 2020), Inventors: A. C. Tas *et al.*, Assignee: Solidia Technologies, Inc.

11. "Advanced Curing Equipment and Methods of Using Same," **US Patent** No. **10,351,478** (July 16, 2019), Inventors: A. C. Tas *et al.*, Assignee: Solidia Technologies, Inc.

12. "Synthesis of Amorphous Calcium Phosphate or Poorly Crystalline Calcium Phosphate Powders by using Calcium Metal," **US Patent** No. **9,108,860** B2 (August 18, 2015) (Sole inventor & Assignee: A. C. Tas)

13. "Calcium Carbonate ($CaCO_3$) Microtablets and Method for the Preparation Thereof," **US Patent** No. **8,470,280** (June 25, 2013) Sole inventor & Assignee: A. C. Tas

14. "Calcium Phosphate Coating of Ti6Al4V by a Na-lactate and Lactic Acid-buffered Body Fluid Solution" **European Patent** No. **2,296,718** (March 27, 2013), PCT Patent. Appl. No: **WO 2009145741 A2** (December 3, 2009) Inventors & Proprietors: A. Pasinli, M. Yuksel, H. Havitcioglu, **A. C. Tas**, R. S. Aksoy, E. Celik, H. Yildiz, M. Toparli, A. Canatan, S. Sener

15. "Method of Preparing Porous Calcium Phosphate Granules," **US Patent** No. **7,381,262** (June 3, 2008) Sole inventor: A. C. Tas, Assignee: Biomet Deutschland GmbH, Germany

16. "Method of Preparing Porous Calcium Phosphate Granules," **European Patent** No. **1,501,771** (May 25, 2011) Sole inventor: A. C. Tas, Assignee: Biomet Deutschland GmbH, Germany

17. "Method of Preparing Porous Calcium Phosphate Granules," **Canadian Patent** No. **2,483,859** (November 17, 2009) Sole inventor: A. C. Tas, Assignee: Biomet Deutschland GmbH, Germany

18. "Method of Preparing Porous Calcium Phosphate Morsels and Granules via Gelatin Processing," **European Patent** No. **1,380,313** (May 18, 2005) Sole inventor: A. C. Tas, Assignee: Biomet Deutschland GmbH, Germany

19. "Metodos de Preparacion de Segmentos y Granulos de Fosfato e Calcio Poroso mediante Procesamiento con Gelatina" **Spanish Patent** No. **2,242,916** (November 16, 2005) Sole inventor: A. C. Tas, Assignee: Biomet Deutschland GmbH, Germany

20. "A New Calcium Phosphate Cement Composition and a Method for the Preparation Thereof," **US Patent** No. **6,929,692** (August 16, 2005) Sole inventor & Assignee: A. C. Tas

21. "A New Calcium Phosphate Cement Composition and a Method for the Preparation Thereof," **European Patent** No. **1,394,132** (March 3, 2004) Sole inventor & Assignee: A. C. Tas

22. "A New Calcium Phosphate Cement Composition and a Method for the Preparation Thereof," **Canadian Patent** No. **2,438,742** (August 9, 2011) Sole inventor & Assignee: A. C. Tas

23. "Method of Producing Crystalline Phosphor Powders at Low Temperature," **European Patent** No. **1,227,139** (April 5, 2006) Sole inventor & Assignee: A. C. Tas

24. Verfahren zur Herstellung von kristallinem Phosphorpulver bei niedriger Temperatur" **German Patent** No. **601 18 514 T2** (August 24, 2006) Sole inventor

& Assignee: A. C. Tas

25. "Dip-Coating of Calcium Hydroxyapatite on Titanium Alloy (Ti-6Al-4V) or Stainless Steel 316L Substrates,"
Turkish Patent No. **TR-1999 00064** (Sole inventor: A. C. Tas)

26. "Manufacture of Porous Calcium Hydroxyapatite (HA) and Tricalcium Phosphate (TCP) Bioceramics,"
Turkish Patent No. **TR-1999 00038** (Co-owner: Scientific and Technical Research Council of Turkey, TUBITAK, Sole inventor: A. C. Tas)

27. "Biomimetic Synthesis of Carbonated Calcium Hydroxyapatite Powders in Urea and Enzyme Urease-containing Synthetic Body Fluids,"
Turkish Patent No. **TR- 1999 00037** (Sole inventor: A. C. Tas)

28. "Hydrothermal Synthesis of Crystalline and $BaCO_3$-free $BaTiO_3$ Powders at 90°C in Air," **Turkish Patent** No. **TR-1996 00539** (Sole inventor: A. C. Tas)

29. "Low-temperature Chemical Synthesis of Ceramic Powders of Calcium Aluminate Binary Compounds,"
Turkish Patent No. **TR-1996 00509** (Sole inventor: A. C. Tas)

30. "Production of Composite (Bi-phasic) Powders of Calcium Phosphate Bioceramics by Using a Chemical Precipitation Technique,
Turkish Patent No. **TR-1996 00469**
Patent issued on: May 21, 2001 (Sole inventor: A. C. Tas)

31. "Production of the Inorganic Phases [$(Ca_{10}(PO_4)_6(OH)_2$: Calcium Hydroxyapatite and $Ca_3(PO_4)_2$: Tricalcium Phosphate] of Synthetic Bones by Using a Chemical Precipitation Technique"
Turkish Patent No. **TR-1995 01422**
Patent issued on: October 2, 1997 (Patent filed in 1994)
(Sole inventor: A. C. Tas)

PATENT APPLICATIONS

1. "Production of Supplementary Cementitious Materials through Wet Carbonation Method"
US Patent application No. **2023/0382792 A1** (November 30, 2023)
Inventors: A. C. Tas *et al*. Assignee: Solidia Technologies, Inc.
→ Patent Document

2. "Production of Supplementary Cementitious Materials through Semi-wet Carbonation, Cyclic Carbonation, Non-slurry Carbonation, High Temperature Carbonation and Granulation Carbonation"
US Patent application No. **2023/0023151 A1** (January 26, 2023)
Inventors: A. C. Tas *et al*. Assignee: Solidia Technologies, Inc.
→ Patent Document

3. “Production of Supplementary Cementitious Materials through Wet Carbonation Method”
US Patent application No. **2022/0267208 A1** (August 25, 2022)
Inventors: A. C. Tas *et al*. Assignee: Solidia Technologies, Inc.
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4. “Multi-step Curing of Green Bodies”
US Patent application No. **2020/0062660 A1** (February 27, 2020)
WIPO-PCT Patent application No: **2020/046927 A1** (March 5, 2020)
Priority Date: August 27, 2018
Sole Inventor: A. C. Tas Assignee: Solidia Technologies, Inc.

5. “Carbonatable Compositions with Admixtures”
WIPO-PCT Patent application No. **2021/257757 A1** (December 23, 2021)
Inventors: A. C. Tas *et al*., Assignee: Solidia Technologies, Inc.
→ Patent Document link at WIPO
→ Patent Document full

6. “Synthetic Pozzolans”
US Patent application No. **2023/0339814 A1** (October 26, 2023)
Inventors: A. C. Tas *et al*. Assignee: Solidia Technologies, Inc.

7. “Mitigation of Corrosion in Carbonated Concrete based on Low-Calcium Silicate Cement”
US Patent application No. **2019/0256415 A1** (August 22, 2019)
Inventors: A. C. Tas *et al*. Assignee: Solidia Technologies, Inc.

8. “Compositions and Method to Improve the Aesthetics of Calcium Silicate-based Cements and Concrete”
US Patent application No. **2019/0152858 A1** (May 23, 2019)
Inventors: A. C. Tas *et al*. Assignee: Solidia Technologies, Inc.

9. “Preparation Method of Brushite and Octacalcium Phosphate Granules”
European Patent application No. **EP 2010/070957** (December 31, 2010)
WIPO-**PCT Patent** application published: **WO 2012/089276 A1** (July 5, 2012) → Documentation
WIPO-PCT International Preliminary Report on Patentability (December 11, 2012) → Patentability Report
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Sole Inventor & Proprietor: **A. C. Tas**

10. “Submicron Monetite Powder Production”
WIPO-**PCT Patent** application No. **WO 2010095001** (August 26, 2010) → Documentation
Sole Inventor: A. C. Tas, Assignee: Yeditepe University, Istanbul, Turkey

11. “Conversion of Calcite ($CaCO_3$) Powders into Macro- and Microporous Calcium Phosphate Scaffolds for Medical Applications”
US Patent application No. **2006/0110422 A1** (May 25, 2006)
Inventors: A. C. Tas and S. B. Bhaduri, Assignee: Clemson University, USA
→ Documentation

12. “Solutions for the Rapid, Room Temperature Calcium Phosphate Coating of Biomedical Devices and Implants”
US Patent application (provisional) No. **60/628,696** (November 2004)
Sole Inventor: A. C. Tas, Assignee: Clemson University, USA

13. “Coating of Bioinert Ceramics with Bioactive Calcium Phosphates to Use Them as Load-bearing Bone Substitutes”
US Patent application (provisional) No. **60/610,443** (September 2004)
Inventors: A. C. Tas and S. B. Bhaduri, Assignee: Clemson University, USA

14. “Method of Preparing Alpha- and Beta-Tricalcium Phosphate Powders”
Patent application numbers:
USA **2003/0235622 A1**,
Canada **2,432,538**,
Japan **2004 026648 A**,
European **1,473,273**
Sole Inventor: A. C. Tas, Assignees: Merck Patent GmbH then Biomet Deutschland GmbH
→ Documentation, European patent application
→ Documentation, US patent application

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• “Japanese Patent Office” at https://www.jpo.go.jp/e/support/j_platpat/patent_search.html

• “Canadian Intellectual Property Office” at https://www.ic.gc.ca/opic-cipo/cpd/eng/search/basic.html

• “Australian Government / Intellectual Property” at https://ipsearch.ipaustralia.gov.au/patents/

• “Turkish Patent Office” at https://www.turkpatent.gov.tr/en/research?form=patent

• “World Intellectual Property Organization (WIPO / PCT)” at
https://patentscope.wipo.int/search/en/search.jsf

then perform a search under the INVENTOR name of “Cuneyt Tas” OR “Cueneyt Tas” OR “Cüneyt Taş”

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“There are painters who transform the sun into a yellow spot, but there are others who with the help of their art and their intelligence, transform a yellow spot into the sun.”

Pablo Picasso