

## 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<sub>3</sub>) 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<sub>3</sub>-free BaTiO<sub>3</sub> 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<sub>10</sub>(PO<sub>4</sub>)<sub>6</sub>(OH)<sub>2</sub>: Calcium Hydroxyapatite and Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>: 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.  
→ Patent Document
4. “Multi-step Curing of Green Bodies”  
**US Patent** application No. **2020/0062660 A1** (February 27, 2020)  
Sole Inventor: A. C. Tas Assignee: Solidia Technologies, Inc.
5. “Carbonatable Compositions with Admixtures”  
**WIPO/PCT patent** application No. **W02021257757** (December 23, 2021)  
Inventors: A. C. Tas *et al.*, Assignee: Solidia Technologies, Inc.  
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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  
**U.S. Patent** application No. **13/993,253** (June 12, 2013)  
**U.S. Patent** application (published) No. **2013/0338237 A1** (December 19, 2013) → Documentation  
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<sub>3</sub>) 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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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*