

# Dilshat U. Tulyaganov

Materials Engineer

Ph.D. & Habilitation on Materials Engineering

Associate Professor

of the Turin Polytechnic University in Tashkent

*17, Niyazova Str., 100174 Tashkent, Uzbekistan*

## Scientific records as reported by SCOPUS in October 2010

- Published scientific articles in the period 1991-2010: **72**
- Citations: **457** (excluding self-citations: **256**)
- h-index: **13**

## List of scientific publications in international scientific journals:

1. Structural characterisation and thermo-physical properties of glasses in the Li<sub>2</sub>O-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-K<sub>2</sub>O system.  
Fernandes, H.R., Tulyaganov, D.U., Goel, A., Ferreira, J.M.F.  
*Journal of Thermal Analysis and Calorimetry*, Article in Press
2. The early stages of nucleation and crystallisation of an apatite glass-ceramic: Evidence for nano-scale crystallisation  
Hill, R.G., O'Donnell, M.D., Law, R.V., Karpukhina, N., Cochrane, B., Tulyaganov, D.U.  
*Journal of Non-Crystalline Solids*, Article in Press
3. Effect of Al<sub>2</sub>O<sub>3</sub> and K<sub>2</sub>O content on structure, properties and devitrification of glasses in the Li<sub>2</sub>O-SiO<sub>2</sub> system  
Fernandes, H.R., Tulyaganov, D.U., Goel, A., Ribeiro, M.J., Pascual, M.J., Ferreira, J.M.F.  
*Journal of the European Ceramic Society* 30 (10), (2010) pp. 2017-2030
4. The effect of TiO<sub>2</sub> and P<sub>2</sub>O<sub>5</sub> on densification behavior and properties of Anortite-Diopside glass-ceramic substrates  
Marques, V.M.F., Tulyaganov, D.U., Kothiyal, G.P., Ferreira, J.M.F.  
*Journal of Electroceramics* 25 (1), (2010) pp. 38-44

5. Structural analysis and thermal behavior of diopside-fluorapatite- wollastonite-based glasses and glass-ceramics  
Kansal, I., Tulyaganov, D.U., Goel, A., Pascual, M.J., Ferreira, J.M.F.  
*Acta Biomaterialia* 6 (11), (2010) pp. 4380-4388
6. Bioactive glass thin films deposited by magnetron sputtering technique: The role of working pressure  
Stan, G.E., Marcov, D.A., Pasuk, I., Miculescu, F., Pina, S., Tulyaganov, D.U., Ferreira, J.M.F.  
*Applied Surface Science* 256 (23), (2010) pp. 7102-7110.
7. Development and performance of diopside based glass-ceramic sealants for solid oxide fuel cells  
Goel, A., Tulyaganov, D.U., Pascual, M.J., Shaaban, E.R., Muñoz, F., Lü, Z., Ferreira, J.M.F.  
*Journal of Non-Crystalline Solids* 356 (20-22), (2010) pp. 1070-1080
8. Biomineralization capability of adherent bio-glass films prepared by magnetron sputtering.  
Stan, G.E., Pina, S., Tulyaganov, D.U., Ferreira, J.M.F., Pasuk, I., Morosanu, C.O.  
*Journal of Materials Science: Materials in Medicine* 21 (4), (2010) pp. 1047-1055
9. Structure, sintering, and crystallization kinetics of alkaline-earth aluminosilicate glass-ceramic sealants for solid oxide fuel cells  
Goel, A., Tulyaganov, D.U., Ferrari, A.M., Shaaban, E.R., Prange, A., Bondioli, F., Ferreira, J.M.F.  
*Journal of the American Ceramic Society* 93 (3), (2010) pp. 830-837
10. Electrical behavior of aluminosilicate glass-ceramic sealants and their interaction with metallic solid oxide fuel cell interconnects.  
Goel, A., Tulyaganov, D.U., Kharton, V.V., Yaremchenko, A.A., Ferreira, J.M.F.  
*Journal of Power Sources* 195 (2), (2010) pp. 522-526
11. Synthesis and properties of lithium disilicate glass-ceramics in the system SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-K<sub>2</sub>O-Li<sub>2</sub>O  
Tulyaganov, D.U., Agathopoulos, S., Kansal, I., Valério, P., Ribeiro, M.J., Ferreira, J.M.F.  
*Ceramics International* 35 (8), pp. 3489-3493
12. The effect of fluoride ions on the structure and crystallization kinetics of La<sub>2</sub>O<sub>3</sub>-containing diopside based oxyfluoride glasses  
Kansal, I., Goel, A., Tulyaganov, D.U., Shaaban, E.R., Ribeiro, M.J., Ferreira, J.M.F.  
*Ceramics International* 35 (8), (2009) pp. 3013-3019.
13. Effect of some rare-earth oxides on structure, devitrification and properties of diopside based glasses.  
Kansal, I., Goel, A., Tulyaganov, D.U., Ferreira, J.M.F.  
*Ceramics International* 35 (8), (2009) pp. 3221-3227
14. Vitrification of low silica fly ash: Suitability of resulting glass ceramics for architectural or electrical insulator applications  
Vasilopoulos, K.C., Tulyaganov, D.U., Agathopoulos, S., Karakassides, M.A., Ribeiro, M., Ferreira, J.M.F., Tsipas, D.  
*Advances in Applied Ceramics* 108 (1), (2009) pp. 27-32
15. Production and characterisation of glass ceramic foams from recycled raw materials.

- Fernandes, H.R., Tulyaganov, D.U., Ferreira, J.M.F.  
*Advances in Applied Ceramics* 108 (1), (2009) pp. 9-13
16. Structure and crystallization behaviour of some MgSiO<sub>3</sub>-based glasses  
Goel, A., Tulyaganov, D.U., Shaaban, E.R., Knee, C.S., Eriksson, S., Ferreira, J.M.F.  
*Ceramics International* 35 (4), (2009) pp. 1529-1538
  17. Optimization of La<sub>2</sub>O<sub>3</sub>-containing diopside based glass-ceramic sealants for fuel cell applications  
Goel, A., Tulyaganov, D.U., Kharton, V.V., Yaremchenko, A.A., Eriksson, S., Ferreira, J.M.F.  
*Journal of Power Sources* 189 (2), (2009) pp. 1032-1043.
  18. Bulk nucleated fine grained mono-mineral glass-ceramics from low-silica fly ash.  
Vasilopoulos, K.C., Tulyaganov, D.U., Agathopoulos, S., Karakassides, M.A., Ferreira, J.M.F., Tsipas, D.  
*Ceramics International* 35 (2), (2009) pp. 555-558
  19. Crystallisation kinetics of diopside-Ca-Tschermak based glasses nucleated with Cr<sub>2</sub>O<sub>3</sub> and Fe<sub>2</sub>O<sub>3</sub>  
Goel, A., Tulyaganov, D.U., Kansal, I., Shaaban, E.R., Ferreira, J.M.F.  
*International Journal of Materials Engineering Innovation* 1 (1), (2009) pp. 40-60
  20. Effect of BaO on the crystallization kinetics of glasses along the Diopside-Ca-Tschermak join  
Goel, A., Tulyaganov, D.U., Goel, I.K., Shaaban, E.R., Ferreira, J.M.F.  
*Journal of Non-Crystalline Solids* 355 (3), (2009) pp. 193-202
  21. Preparation and characterization of foams from sheet glass and fly ash using carbonates as foaming agents  
Fernandes, H.R., Tulyaganov, D.U., Ferreira, J.M.F.  
*Ceramics International* 35 (1), (2009) pp. 229-235
  22. Crystallization process and some properties of Li<sub>2</sub>O-SiO<sub>2</sub> glass-ceramics doped with Al<sub>2</sub>O<sub>3</sub> and K<sub>2</sub>O  
Fernandes, H.R., Tulyaganov, D.U., Goel, I.K., Ferreira, J.M.F.  
*Journal of the American Ceramic Society* 91 (11), (2008) pp. 3698-3703
  23. Influence of ZnO on the crystallization kinetics and properties of diopside-Ca-Tschermak based glasses and glass-ceramics  
Goel, A., Tulyaganov, D.U., Shaaban, E.R., Basu, R.N., Ferreira, J.M.F.  
*Journal of Applied Physics* 104 (4), (2008) art. no. 043529
  24. Study of crystallization kinetics in glasses along the diopside-Ca- Tschermak join  
Goel, A., Shaaban, E.R., Tulyaganov, D.U., Ferreira, J.M.F.  
*Journal of the American Ceramic Society* 91 (8), (2008) pp. 2690-2697
  25. The effect of Cr<sub>2</sub>O<sub>3</sub> addition on crystallization and properties of La<sub>2</sub>O<sub>3</sub>-containing diopside glass-ceramics  
Goel, A., Tulyaganov, D.U., Kharton, V.V., Yaremchenko, A.A., Ferreira, J.M.F.  
*Acta Materialia* 56 (13), (2008) pp. 3065-3076
  26. Low temperature production of glass ceramics in the anorthite-diopside system via sintering and crystallization of glass powder compacts  
Marques, V.M.F., Tulyaganov, D.U., Agathopoulos, S., Ferreira, J.M.F.  
*Ceramics International* 34 (5), (2008) pp. 1145-1152

27. The effect of Al<sub>2</sub>O<sub>3</sub> on sintering and crystallization of MgSiO<sub>3</sub>-based glass-powder compacts  
Goel, A., Tulyaganov, D.U., Agathopoulos, S., Ferreira, J.M.F.  
*Ceramics International* 34 (3), (2008) pp. 505-510
28. Synthesis and characterization of MgSiO<sub>3</sub>-containing glass-ceramics  
Goel, A., Tulyaganov, D.U., Agathopoulos, S., Ribeiro, M.J., Ferreira, J.M.F.  
*Ceramics International* 33 (8), (2007) pp. 1481-1487
29. Effect of BaO addition on crystallization, microstructure, and properties of diopside-Ca-Tschermak clinopyroxene-based glass-ceramics  
Goel, A., Tulyaganov, D.U., Kharton, V.V., Yaremchenko, A.A., Agathopoulos, S., Ferreira, J.M.F.  
*Journal of the American Ceramic Society* 90 (7), (2007) pp. 2236-2244
30. Crystallization behaviour, structure and properties of sintered glasses in the diopside-Ca-Tschermak system  
Goel, A., Tulyaganov, D.U., Agathopoulos, S., Ribeiro, M.J., Ferreira, J.M.F.  
*Journal of the European Ceramic Society* 27 (10), (2007) pp. 3231-3238
31. The influence of incorporation of ZnO- containing glazes on the properties of hard porcelains  
Tulyaganov, D.U., Agathopoulos, S., Fernandes, H.R., Ferreira, J.M.F.  
*Journal of the European Ceramic Society* 27 (2-3), (2007) pp. 1665-1670
32. Diopside-Ca-Tschermak clinopyroxene based glass-ceramics processed via sintering and crystallization of glass powder compacts  
Goel, A., Tulyaganov, D.U., Agathopoulos, S., Ribeiro, M.J., Basu, R.N., Ferreira, J.M.F.  
*Journal of the European Ceramic Society* 27 (5), (2007) pp. 2325-2331
33. Low temperature synthesis of anorthite based glass-ceramics via sintering and crystallization of glass-powder compacts  
Marques, V.M.F., Tulyaganov, D.U., Agathopoulos, S., Gataullin, V.Kh., Kothiyal, G.P., Ferreira, J.M.F.  
*Journal of the European Ceramic Society* 26 (13), (2006) pp. 2503-2510
34. Sintering and crystallization of akermanite-based glass-ceramics  
Ventura, J.M.G., Tulyaganov, D.U., Agathopoulos, S., Ferreira, J.M.F.  
*Materials Letters* 60 (12), (2006) pp. 1488-1491
35. Preparation and characterization of high compressive strength foams from sheet glass  
Tulyaganov, D.U., Fernandes, H.R., Agathopoulos, S., Ferreira, J.M.F.  
*Journal of Porous Materials* 13 (2), (2006) pp. 133-139
36. Structural analysis and devitrification of glasses based on the CaO-MgO-SiO<sub>2</sub> system with B<sub>2</sub>O<sub>3</sub>, Na<sub>2</sub>O, CaF<sub>2</sub> and P<sub>2</sub>O<sub>5</sub> additives  
Agathopoulos, S., Tulyaganov, D.U., Ventura, J.M.G., Kannan, S., Saranti, A., Karakassides, M.A., Ferreira, J.M.F.  
*Journal of Non-Crystalline Solids* 352 (4), (2006) pp. 322-328
37. Formation of hydroxyapatite onto glasses of the CaO-MgO-SiO<sub>2</sub> system with B<sub>2</sub>O<sub>3</sub>, Na<sub>2</sub>O, CaF<sub>2</sub> and P<sub>2</sub>O<sub>5</sub> additives  
Agathopoulos, S., Tulyaganov, D.U., Ventura, J.M.G., Kannan, S., Karakassides, M.A., Ferreira, J.M.F.  
*Biomaterials* 27 (9), (2006) pp. 1832-1840

38. Synthesis of glass-ceramics in the CaO-MgO-SiO<sub>2</sub> system with B<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, Na<sub>2</sub>O and CaF<sub>2</sub> additives  
Tulyaganov, D.U., Agathopoulos, S., Ventura, J.M., Karakassides, M.A., Fabrichnaya, O., Ferreira, J.M.F.  
*Journal of the European Ceramic Society* 26 (8), (2006) pp. 1463-1471
39. Influence of lithium oxide as auxiliary flux on the properties of triaxial porcelain bodies  
Tulyaganov, D.U., Agathopoulos, S., Fernandes, H.R., Ferreira, J.M.F.  
*Journal of the European Ceramic Society* 26 (7), (2006) pp. 1131-1139
40. Effect of sintering temperature on mechanical and microstructural properties of bovine hydroxyapatite (BHA)  
Goller, G., Oktar, F.N., Agathopoulos, S., Tulyaganov, D.U., Ferreira, J.M.F., Kayali, E.S., Peker, I.  
*Journal of Sol-Gel Science and Technology* 37 (2), (2006) pp. 111-115
41. Processing of glass-ceramics in the SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-MgO-CaO-Na<sub>2</sub>O-(P<sub>2</sub>O<sub>5</sub>)-F system via sintering and crystallization of glass powder compacts  
Tulyaganov, D.U., Agathopoulos, S., Fernandes, H.R., Ferreira, J.M.F.  
*Ceramics International* 32 (2), (2006) pp. 195-200
42. Influence of Li<sub>2</sub>O doping on non-isothermal evolution of phases in K-Na-containing aluminosilicate matrix  
Tulyaganov, D.U., Agathopoulos, S., Fernandes, H.R., Ferreira, J.M.F., Fabrichnaya, O.  
*Journal of the American Ceramic Society* 89 (1), (2006) pp. 292-297
43. The influence of sintering temperature on mechanical and microstructural properties of bovine hydroxyapatite  
Goller, G., Oktar, F.N., Agathopoulos, S., Tulyaganov, D.U., Ferreira, J.M.F., Kayali, E.S., Peker, I.  
*Key Engineering Materials* 284-286, (2005) pp. 325-328
44. The influence of sintering temperature on the properties of composites of biologic hydroxyapatite and zirconia  
Oktar, F.N., Genc, Y., Goller, G., Agathopoulos, S., Tulyaganov, D.U., Ferreira, J.M.F., Kayali, E.S., Salman, S.  
*Key Engineering Materials* 284-286, (2005) pp. 709-712
45. Interfacial interactions between liquid new biocompatible model glasses and solid metallic and ceramic substrates used in biomedicine  
Key, I.A., Pina, S., Agathopoulos, S., Tulyaganov, D.U., Ferreira, J.M.F.  
*Key Engineering Materials* 284-286, (2005) pp. 835-838
46. Stages of reactive wetting  
Agathopoulos, S., Tulyaganov, D.U., Ferreira, J.M.F.  
*Key Engineering Materials* 280-283 (II), (2005) pp. 1801-1804
47. Effect of isomorphic substitutions on crystallization of mica and amphibole phases in glasses of the system SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-CaO-MgO-Li<sub>2</sub>O-(K,Na)<sub>2</sub>O-F  
Pina, S., Fernandes, H.R., Agathopoulos, S., Tulyaganov, D.U., Ferreira, J.M.F.  
*Ceramic Transactions* 170, (2005) pp. 225-236
48. A new model formulation of the SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-MgO-CaO-Na<sub>2</sub>O-F glass-ceramics  
Agathopoulos, S., Tulyaganov, D.U., Valério, P., Ferreira, J.M.F.  
*Biomaterials* 26 (15), (2005) pp. 2255-2264

49. Migration of liquid phase in low temperature sintering of AlN  
Fu, R., Chen, K., Agathopoulos, S., Ferro, M.C., Tulyaganov, D.U., Ferreira, J.M.F.  
*Journal of Materials Science* 40 (9-10), (2005) pp. 2425-2429
50. Preparation and crystallization of glasses in the system tetrasilicic mica-fluorapatite-diopside  
Tulyaganov, D.U., Agathopoulos, S., Fernandes, H.R., Ventura, J.M., Ferreira, J.M.F.  
*Journal of the European Ceramic Society* 24 (13), (2004) pp. 3521-3528
51. Incorporation of granite cutting sludge in industrial porcelain tile formulations  
Torres, P., Fernandes, H.R., Agathopoulos, S., Tulyaganov, D.U., Ferreira, J.M.F.  
*Journal of the European Ceramic Society* 24 (10-11), (2004) pp. 3177-3185
52. Synthesis of lithium aluminosilicate glass and glass-ceramics from spodumene material  
Tulyaganov, D.U., Agathopoulos, S., Fernandes, H.R., Ferreira, J.M.F.  
*Ceramics International* 30 (6), (2004) pp. 1023-1030
53. Production of Al-rich sludge-containing ceramic bodies by different shaping techniques  
Ribeiro, M.J., Tulyaganov, D.U., Ferreira, J.M.F., Labrincha, J.A.  
*Journal of Materials Processing Technology* 148 (1), (2004) pp. 139-146
54. Synthesis and characterization of synthetic F-mica containing glass-ceramics in the system  $\text{SiO}_2 \cdot \text{Al}_2\text{O}_3 \cdot \text{B}_2\text{O}_3 \cdot \text{CaO} \cdot \text{MgO} \cdot \text{Li}_2\text{O} \cdot (\text{K}, \text{Na})_2\text{O} \cdot \text{F}$   
Tulyaganov, D.U., Agathopoulos, S., Fernandes, H.R., Ferreira, J.M.F.  
*Journal of Materials Research* 19 (4), (2004) pp. 1234-1242
55. Glass-ceramics in the former Soviet Union: A review on industry-oriented developments  
Tulyaganov, D.U., Agathopoulos, S., Kharton, V.V., Marques, F.M.B.  
*Industrial Ceramics* 23 (2), (2004) pp. 101-116
56. The fluorapatite-anorthite system in biomedicine  
Agathopoulos, S., Tulyaganov, D.U., Marques, P.A.A.P., Ferro, M.C., Fernandes, M.H.V., Correia, R.N.  
*Biomaterials* 24 (7), (2003) pp. 1317-1331
57. Mullite-alumina refractory ceramics obtained from mixtures of natural common materials and recycled Al-rich anodizing sludge  
Tulyaganov, D.U., Olhero, S.M.H., Ribeiro, M.J., Ferreira, J.M.F., Labrincha, J.A.  
*Journal of Materials Synthesis and Processing* 10 (6), (2002) pp. 311-318
58. Glasses and glass-ceramics of the system  $\text{CaO} \cdot \text{MgO} \cdot \text{Al}_2\text{O}_3 \cdot \text{SiO}_2$  obtained from natural sedimentary raw materials  
Tulyaganov, D.U., Labrincha, J.A., Ribeiro, M.J.  
*Glass Science and Technology: Glastechnische Berichte* 75 (6), (2002) pp. 275-279
59. Processing of cordierite based ceramics from alkaline-earth-aluminosilicate glass, kaolin, alumina and magnesite  
Tulyaganov, D.U., Tukhtaev, M.E., Escalante, J.I., Ribeiro, M.J., Labrincha, J.A.  
*Journal of the European Ceramic Society* 22 (11), (2002) pp. 1775-1782
60. Development of glass-ceramics by sintering and crystallization of fine powders of calcium-magnesium-aluminosilicate glass  
Tulyaganov, D.U., Ribeiro, M.J., Labrincha, J.A.  
*Ceramics International* 28 (5), pp. 515-520
61. Recycling of Al-rich industrial sludge in refractory ceramic pressed bodies  
Ribeiro, M.J., Tulyaganov, D.U., Ferreira, J.M., Labrincha, J.A.

- Ceramics International* 28 (3), (2002) pp. 319-326
62. Whiteware bodies with low deformation characteristics  
Tulyaganov, D.U., López-Cuevas, J., Méndez-Nonell, J., Ismatov, A.A.  
*American Ceramic Society Bulletin* 80 (1), (2001) pp. 65-68
  63. Phase equilibrium in the fluorapatite-anorthite-diopside system  
Tulyaganov, D.U.  
*Journal of the American Ceramic Society* 83 (12), (2000) pp. 3141-3146
  64. Low-melting glaze coatings for internal facing tiles  
Tulyaganov, D.U., Aripova, M.Kh., Ismatov, A.A., Alikulov, A.M., Frisher, E.I.  
*Glass and Ceramics* 50 (5), (1993) pp. 210-211
  65. Low-melting glaze coatings for interior facing tiles  
Tulyaganov, D.U., Aripova, M.Kh., Ismatov, A.A., Alikulov, A.M., Frisher, E.I.  
*Steklo i Keramika* (5), (1993) pp. 16-17
  66. Glass crystallization in the  $\text{Ca}_5[\text{PO}_4]_3\text{F}-\text{CaAl}_2\text{Si}_2\text{O}_8$  and  $\text{Ca}_5[\text{PO}_4]_3\text{F}-\text{CaMgSi}_2\text{O}_6$  systems  
Tulyaganov, D.U., Ismatov, A.A., Arkhipova, M.Kh.  
*Fizika i Khimiya Stekla* 19 (2), (1993) pp. 285-292
  67. Glass-ceramic biomaterials based on the fluorapatite-anorthite and fluorapatite-diopside systems  
Tulyaganov, D.U., Khodakovskaya, R.Ya.  
*Glass and Ceramics (English translation of Steklo i Keramika)* 48 (5-6), (1992) pp. 221-222
  68. Glass crystal materials in the anorthite-diopside-fluorapatite system  
Tairov, R.Z., Tulyaganov, D.U., Ismatov, A.A.  
*Glass and Ceramics (English translation of Steklo i Keramika)* 48 (3-4), (1991) pp. 117-119
  69. Glass crystalline biomaterials on the basis of fluorine-apatite-anorthite and fluorine-apatite-diopside  
Tulyaganov, D.U., Khodakovskaya, R.Ya.  
*Steklo i Keramika* (5), (1991) pp. 27-28
  70. Glass-ceramic biomaterials based on the fluorapatite-anorthite and fluorapatite-diopside systems  
Tulyaganov, D.U., Khodakovskaya, R.Ya.  
*Glass and Ceramics* 48 (5), (1991) pp. 221-222
  71. Glass crystalline materials of anorthite-diopside-fluoroapatite system  
Tairov, R.Z., Tulyaganov, D.U., Ismatov, A.A.  
*Steklo i Keramika* (3), (1991) pp. 21-22
  72. Glass crystal materials in the anorthite-diopside-fluorapatite system  
Tairov, R.Z., Tulyaganov, D.U., Ismatov, A.A.  
*Glass and Ceramics* 48 (3), (1991) pp. 117-119