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Faculty of Mechanical Engineering
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EDUCATION

Technical University of Liberec, Liberec, Czech Republic
Ph.D. in Material Sciences, 2007-2011

Nha Trang University, Nha Trang, Vietnam
MSc. in Biochemistry, 1999 - 2002
B.A. in Marine Engineering, 1994-1998

RESEARCH INTERESTS

- Geopolymer and Geocomposites.
- Fire-Resistant and fire-retardant materials
- Ceramic Materials

RESEARCH EXPERIENCE

- Design and manufacture of friction stir welding equipments, No. B2013-13-07, 2013 – 2015, participant.
- Initial research on ability to fabricate fire resistant material base on rice husk ash, No. TR2012-13-22, 2012 – 2013, principal investigator.
- Advanced reinforcement geopolymer composites for technological use, Czech Republish, No. FT-TA4/068, 2007-2010, participant.
- Design and manufacture of integrated system for commercial shrimp farming, No. KC.07.27, 2004-2006, participant.
- Actual situation and solutions to equip mechanical tools for the minorities in mountainous provinces in south central region, No. B2004-33-34, 2004-2005, participant.
- Ability to produce Polyterafluoro- ethylen (PTFE-Teflon) gears for fishing equipments, No. TR2002-33-0, 2002-2003, principal investigator.

TEACHING RESPONSIBILITY

Undergraduate

- MEM329 - Engineering materials
- MEM335 - Construction materials

Graduate

- CE502 - Advanced engineering materials
- ENM505 - Materials selection for engineering design

PUBLICATIONS and PRESENTATIONS

Books

1. **Tran Doan Hung**, Petr Louda, Dora Kroisová, Oleg Bortnovsky and Nguyen Thang Xiem. 2011, Chapter 4 - New Generation of Geopolymer Composite for Fire-Resistance, Advances in Composite Materials - Analysis of Natural and Man-Made Materials, Edited by Pavla Te□s□inova, ISBN 978-953-307-449-8, InTech Publisher.
2. **Tran Doan Hung**, 2010, Thermal Silica-Based Geopolymer Composite System: Study of Processing and Mechanical Properties (PhD thesis), ISBN 978-80-7372-671-3, Technical University of Liberec.

Journals

1. **Tran Doan Hung**, Affects of Mass Burning Scales on Properties of Rice Husk Ash as Raw Material to Produce Geopolymer, International Journal of Emerging Technology and Advanced Engineering, ISSN 2250-2459, Volume 3, Issue 7, 2013, pp. 422-428.
2. **Trần Doãn Hùng**, Petr Louda, Dora Kroisová and Oleg Bortnovsky, *Preliminary Study of Applying Geopolymer Composites to Composite Shipbuilding Industry*, Journal of Fisheries Science and Technology, ISSN 1859-2252, 1/2011, pp. 94-100 (in Vietnamese).
3. **Hung Tran Doan**, Petr Louda, Dora Kroisová, Oleg Bortnovsky, Fire-Resistance of Thermal Silica-Based Geopolymer – Carbon Composite, Scientific-Technical Journal - Fine mechanics and optics, 1/2011, pp. 5-9.
4. **D.H. Tran**, D. Kroisová, P. Louda, O. Bortnovsky, P. Bezucha, Effect of curing temperature on flexural properties of silica-based geopolymer - carbon reinforced composite, Journal of Achievements in Materials and Manufacturing Engineering, ISSN 1734-8412, Vol. 37/2 2009, pp. 492-497.
5. N.T. Xiem, D. Kroisová, P. Louda, **T.D. Hung**, Z. Rozek, Effects of temperature and plasma treatment on mechanical properties of ceramic fibres, Journal of Achievements in Materials and Manufacturing Engineering, ISSN 1734-8412, Vol. 37/2 (2009), pp. 526-531.
6. **T.D. Hung**, D. Pernica, Dora Kroisová, Oleg Bortnovsky, Petr Louda, Vladka Rylichova, *Composites Base on Geopolymer Matrices: Preliminary Fabrication, Mechanical Properties and Future Applications*, Journal of Advanced Materials Research Vols. 55-57 (2008), pp. 477-480. ISBN: 978-0-87849-356-2 (Print version), ISBN: 978-3-908453-10-9 (CD version).

Presentations

1. **Tran Doan Hung**, Mechanical Properties of Basal Geopolymer Composite Rods under Real Pultrusion System, The 1st International Conference on Material Science and Technology, Nha Trang University - Vietnam, April 7, 2012.
2. **Tran Doan Hung**, Properties of Silica-Based Geopolymer – Carbon Composite, 4th AUN/SEED-NET Regional Conference On Materials, ISBN: 978-604-911-003-0, Ha Noi - Vietnam, December 8-9, 2011.
3. O. Bortnovsky*, P. Bezucha, **D. Tran**, D. Kroisova, P. Hajkova, Flexural properties of pure and modified geopolymer matrix/ unidirectional fibers reinforced composites, 35th International Conference and Exposition on Advanced Ceramics and Composites (ICACC'11), Daytona Beach Florida – USA, January 23-28, 2011.
4. **Hung Tran Doan**, Petr Louda, Dora Kroisová, Oleg Bortnovsky, Thermal-Mechanical Behavior of Silica-Based Geopolymer – Carbon Composite, 7th International Conference Textile Science (TEXSCI 2010), Liberec (Czech Republic), September 2010, ISBN: 978-80-7372-638-6, (CD version).
5. **Hung Tran Doan**, Dora Kroisová, Petr Louda, Oleg Bortnovsky, Petr Bezucha, *Mechanical Properties of Silica-Based Geopolymer Composites Cured at Ambient Conditions in Accordance with Size-Independent Method*, The 2nd RMUTP International Conference: Green Technology and Productivity, Bangkok (Thailand), June 2010, pp. 134-141, In press.
6. **Hung Tran Doan**, Dora Kroisová, Petr Louda, Oleg Bortnovsky, Petr Bezucha, *Mechanical Properties of Geopolymer Composite Systems Curing at Ambient Condition*, 16th International Conference: Structure and Structural Mechanics of Textiles, Liberec (Czech Republish), December 2009, ISBN 978-80-7372-542-6, (CD version).
7. Nguyen Thang Xiem, Dora Kroisová, Petr Louda, **Hung Tran Doan**, Oleg Bortnovsky: *Effects of Plasma Treatment on Mechanical Properties of Commercial Fibers Based on Geopolymer Matrix Composites*, Structure and Structural Mechanics of Textiles, Liberec (Czech Republish), December 2009, ISBN 978-80-7372-542-6. (CD version).
8. **Hung Tran Doan**, Dora Kroisová, Petr Louda, Xiem Nguyen Thang, Oleg Bortnovsky, Petr Bezucha, *Effect of temperature of curing on Flexural properties of Thermal silica based Geopolymer - Carbon fiber reinforcement*, 4th. International Conference on Vacuum and Plasma Surface Engineering (VaPSE 2009), Liberec (Czech Republic), October 2009, pp. 43, ISBN 978-80-7372-524-2.
9. Dora Kroisová, Ales Richter, **Hung Tran Doan**, *Measurement of Electromagnetic properties of Geopolymers composite and Expected application in Electrical Engineering*, International

Conference on Vacuum and Plasma Surface Engineering VaPSE 2009, Liberec (Czech Republic) October 2009, pp. 57, ISBN 978-80-7372-524-2.

10. Nguyen Thang Xiem, Dora Kroisová, Petr Louda, **Hung Tran Doan**, Zbigniew Rożek: *Effects of temperature and plasma treatment on mechanical properties of ceramic fibers*, 4th. International Conference on Vacuum and Plasma Surface Engineering (VaPSE 2009), Liberec (Czech Republic), October 2009, pp. 59 ISBN 978-80-7372-524-2.
11. Zbigniew Rożek, **Hung Tran Doan**, Petr Louda, *Geopolymer matrice composites modified by RF PACVD method*, 4-th symposium on vacuum based science and technology, 8-th annual meeting of German vacuum society DVG Organized by Institute Mechatronics, Nanotechnology and Vacuum Technique of Koszalin University of Technology Koszalin Kołobrzeg (Poland), September 2009, ISBN 978-83-7365-179-1.
12. **D.H. Tran**, P. Louda, D. Kroisová, O. Bortnovsky, *Composites Based on Geopolymer matrices: Properties and Potential Applications*, The National Conference on Advances in Mechanical Engineering (NCAME-2009), Mumbai (India), Jan 2009, p. 239-244. In press.
13. **Doan Hung Tran**, David Pernica, Louda Petr, Kroisová Dora, *Mechanical Properties of Composite Material Based on Copper Fabric and Geopolymer Matrix*, 15th. International Conference on Structure and Structure Mechanics of Textile Fabrics, Liberec (Czech Republic), December 2008, pp. 41-48, ISBN 978-80-7372-418-4.
14. David Pernica, **Tran Doan Hung**, *Geopolymer Composites Curing condition depending on Different Mechanical Behavior*, 15th. International Conference on Structure and Structure Mechanics of Textile Fabrics, Liberec (Czech Republic), December 2008, pp. 169-174, ISBN 978-80-7372-418-4.
15. **T.D. Hung**, D. Kroisová, O. Bortnovsky, P. Louda, N.T. Xiem: *Primary Abilities of Thermal Sustainment of Composites based on Geopolymer matrices*, 3rd. International Conference on Vacuum and Plasma Surface Engineering (VaPSE 2008), Liberec (Czech Republic), October 2008, pp. 69, ISBN: 978-80-7372-398-9.
16. **T.D. Hung**, D. Pernica, D. Kroisová, O. Bortnovsky, P. Louda: *Effects of curing condition on mechanical properties of fibers and Composites base on Geopolymer matrices*, 2nd. International Student Conference of Material Science, Technical University of Liberec, Liberec (Czech Republic), October 2008, ISBN: 978-80-7372-393-4, (CD version).
17. **Hung Tran Doan**, Dora Kroisová, Oleg Bortnovsky, Petr Louda and David Pernica, *Composites Base on Geopolymer Matrices: Priliminary Fabrication, Mechanical Properties and Future Applications,* Junior Euromat 2008, Lausanne, Switzerland, July 2008.
18. Petr Louda, Dora Kroisová, Oleg Bortnovsky, **Hung Tran Doan** and David Pernica, *Composites Base on Geopolymer Matrices: Priliminary Fabrication, Mechanical Properties*

and Future Applications, International Conference on Smart Materials, Smart/Intelligent Materials and Nanotechnology and 2nd International Workshop on Functional Materials and Nanomaterials (Smartmat-'08 & IWOFM-2, 22-25 April 2008, Chiang Mai, Thailand.