




Usman Khan, Ph.D.

Associate

 Washington, D.C.

 202-626-6383

 khan@fr.com

Overview

About Usman

Usman Khan, Ph.D., is an associate in the Washington, D.C., office of Fish & Richardson P.C. Dr. Khan's practice focuses on U.S. and foreign patent prosecution and post-grant proceedings. Dr. Khan has provided strategic counseling and assistance to startups, entrepreneurs, educational institutions, and Fortune 500 companies for patent procurement and portfolio management. In addition to his prosecution work, Dr. Khan has been involved in over a dozen CBM, PGR, and IPR proceedings at the Patent Trial and Appeal Board.

Dr. Khan has extensive experience with the following technologies: semiconductors, software, signal processing / wireless communications and networks, OLEDs, LEDs, and LCDs, mobile devices and displays, control systems, analog and mixed signal circuits, nanotechnology, cybersecurity, financial and business services, internet search and advertising, internet of things (IoT)/Me, and medical devices.

Prior to his legal career, Dr. Khan conducted research at the high frequency materials measurement and information center at Tufts University, where he published various papers in IEEE and physics journals and conferences. Dr. Khan also served as a reviewer for IEEE Transactions and IEE SMT journals.???

Focus Areas

Services

- Patent
- Post-Grant
- Opinions and Strategic Counseling
- Patent Portfolio Management
- Patent Prosecution
- Startup and Early-Stage Companies

Industries

- Financial and Business Services
- Internet
- Medical Devices
- Nanotechnology
- Semiconductors
- Software

Education

J.D., George Mason University School of Law

Ph.D., Electrical Engineering, Tufts University Recipient of Tufts Academic & Research Scholarship

M.S., Electrical Engineering, Tufts University Recipient of Tufts Academic & Research Scholarship

B.S. *magna cum laude*, *Tau Beta Pi*, *Eta Kappa Nu*, Electrical Engineering, Tufts University Golden Key National Honor Society

Insights

Selected Publications

Nawaf N. Al-Moayed, Mohammed N. Afsar, Usman A. Khan, Sean McCooey, and Mahmut Obul, "Nano Ferrites Microwave Complex Permeability and Permittivity Measurements by T/R Technique in Waveguide," *IEEE Transactions on Magnetics*, Vol. 44, No. 7, pp. 1768-1772, July, 2008.

Baris C. Piyade, Usman A. Khan, Mohammed N. Afsar, "Polarization Effects on the Millimeter Wave Dielectric Properties of Pesticide," *Proceedings of the 2008 IEEE International Instrumentation and Measurement Technology Conference*, May, 2008.

Usman Khan, M. N. Afsar, Nicholas Nguyen, "Millimeter and Submillimeter Wave Dielectric Measurements of Household Powders Using Fourier Transform Spectroscopy", *IEEE Transactions on Instrumentation and Measurement*, Vol. 57, No. 2, pp. 286-293, Feb. 2008.

Usman Khan, Nawaf Almoayed, Nicholas Nguyen, Konstantin Korolev, Mohammed Afsar, and Stephen Naber, "Broadband Dielectric Characterization of Tumorous and Non-tumorous Breast Tissues," *IEEE Transactions on Microwave Theory and Techniques*, Vol. 55, No. 12, pp. 2887-2893, Dec. 2007.

Usman Khan, M. N. Afsar, "Measurement of Broadband Dielectric Properties of 10% Formalin and 1,4 Dioxane using Dispersive Fourier Transform Spectroscopy", *IEEE Transactions on Instrumentation and Measurement*, Vol. 56, No. 6, pp. 2354-2359, Dec. 2007.

Usman A. Khan and Mohammed N. Afsar, "Terahertz Dielectric Measurements of Household Powders," *Proceedings of SPIE – The International Society for Optical Engineering*, Vol. 6772, Sept. 2007.

B. R. Dantal, A. Saigal, M. A. Zimmerman, M. N. Afsar, K. A. Korolev, and U. A. Khan, "Polarization Measurements of Molded Liquid Crystal Polymer / Titania Composites," *Proceedings of the Materials Science & Technology Conference and Exhibit (MS&T '07)*, Detroit, MI, Sept. 2007.

B. R. Dantal, A. Saigal, M. A. Zimmerman, M. N. Afsar, K. A. Korolev, and U. A. Khan, "Millimeter wave spectroscopy and materials characterization of refractive liquid crystal polymer/titania composites," *Proceedings of the WIT – Materials Characterization*, Italy, June, 2007.

Usman Khan, Nawaf Almoayed, Nicholas Nguyen, Mahmut Obol, Konstantin Korolev, Mohammed Afsar, and Stephen Naber, "High Frequency Dielectric Characteristics of Tumorous and Non-tumorous Breast Tissues," *IEEE MTT-S International Microwave Symposium Digest*, Hawaii, USA, June, 2007, pp. 1341-1344.

Usman Khan, Nicholas Nguyen, M. N. Afsar, "Millimeter Wave and Terahertz Dielectric Measurements of malignant and non-malignant breast tissues," *Proceedings of 2007 IEEE Instrumentation and Measurement Technology Conference (IMTC)*

, May, 2007, pp. 4258045.

Nawaf Almoayed, Usman Khan, Mahmut Obol, Sanju Gupta and Mohammed Afsar, "Characterization of Single and Multiwall Carbon Nanotubes at Microwave Frequencies," *Proceedings of the 2007 IEEE Instrumentation and Measurement Technology Conference (IMTC)*, May, 2007, pp. 4258227.

Usman Khan, Nicholas Nguyen, M. N. Afsar, "Refractive Index, Absorption Coefficient, Complex Real and Imaginary Permittivity, and Loss Tangent Measurement of Ferrimagnetic Materials at Millimeter Wave and Terahertz Range," *Proceedings of 10th Joint InterMag / MMM Conference*, Baltimore, MD, Jan. 2007.

Usman Khan, Nicholas Nguyen, M. N. Afsar, "Dielectric Properties of Common Household Powders at Millimeter Wave and Terahertz Frequencies," *Proceedings of the Joint 31st International Conference on Infrared and Millimeter Waves and 13th International Conference on Terahertz Electronics (IRMMW-THz 2006)*, Shanghai, China, Sept. 2006, pp. 410.

Usman Khan, M. N. Afsar, Nicholas Nguyen, "Millimeter and Submillimeter Wave Dielectric Measurements of Household Powders Using Fourier Transform Spectroscopy," *Proceedings of the 2006 IEEE Instrumentation and Measurement Technology Conference (IMTC)*, 2006, pp. 2209-2213.

Usman Khan, M. N. Afsar, "High Frequency Dielectric Measurements of Liquids and Solids," *Proceedings of the Joint 30th International Conference on Infrared and Millimeter Waves and 13th International Conference on Terahertz Electronics (IRMMW-THz 2005)*, Williamsburg, VA, Sept. 2005, pp. 64-65.

M. N. Afsar, Usman Khan, "Measurement of Broadband Dielectric Properties of 10% Formalin and 1,4 Dioxane using Dispersive Fourier Transform Spectroscopy," *Proceedings of the 2005 IEEE Instrumentation and Measurement Technology Conference (IMTC)*, Vol II, 2005, pp 925-928.

Memberships & Affiliations

PTAB Bar Association

Languages

- Urdu
- Thai
- English

- Hindi