

LIST OF PUBLICATIONS

Faculty: Dr Somesh Vinayak Tewari

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JOURNAL PUBLICATIONS

Compact Inertial Electrostatic Confinement D-D Fusion Neutron Generator - S K Sharma, **SV Tewari**, Nitin Waghmare, Jagannadha Raju, Divakar Rao and Archana Sharma, *Annals of Nuclear Energy*, 159, 108358, [2021]

Microsecond timescale combustion of aluminum initiated by an underwater electrical wire explosion- A. Rososhek, S. Efimov, A. Goldman, **S. V. Tewari**, and Ya. E. Krasik - *Physics of Plasmas*, 26, 053510, (2019)

Evolution of a shock wave generated by underwater electrical explosion of a single wire- A. Rososhek, S. Efimov, V. Tz. Gurovich, A. Virozub, **S. V. Tewari**, and Ya. E. Krasik - *Physics of Plasmas*, 26, 042302, (2019)

Phase transitions of copper, aluminum and tungsten wires during underwater electrical explosions- A. Rososhek, S. Efimov, **S.V. Tewari**, D. Yanuka, and Ya. E. Krasik - *Physics of Plasmas*, 25, 102709 (2018)

Comparison of underwater electrical explosions of spherical wire arrays at different timescales-A. Rososhek, S. Efimov, **S.V. Tewari**, D. Yanuka, V. Tz. Gurovich, and Ya. E. Krasik - *Physics of Plasmas*, 25, 062709 (2018)

Spherical wire arrays electrical explosion in water and glycerol -A. Rososhek, S. Efimov, M. Nitishinskiy, D. Yanuka, **S.V. Tewari**, V. Gurovich, K. Khishchenko, and Ya. E. Krasik - *Physics of Plasmas*, 24, 122705 (2017)

Surface potential decay of PMMA and POM in air- **S.V. Tewari**, R. Chandra, S. K. Sharma, R. Sarathi, A. Sharma, and K. C. Mittal - *IOP Material Research Express*, 2, 045301 (2015)

Effect of spacer surface and geometry on surface discharge in gas using PIC simulation- **S.V. Tewari**, A. Roy, A. Sharma, and K. C. Mittal - *IEEE Transactions on Plasma Science*, 43, 587-593 (2015)

Optical emission spectroscopy study on flashover along insulator surface due to particle contamination- **S.V. Tewari**, R. J. Kshirsagar, A. Roy, R. Sarathi, A. Sharma, and K. C. Mittal - *Laser and Particle Beams*, 32, 681-689 (2014)

Development and Analysis of PFN based Compact Marx generator by using FIT technique for an Antenna Load- **S.V. Tewari**, R. Agarwal, P. C. Saroj, A. Sharma, K. C. Mittal, S. Umbarkar, and H. A. Mangalvedkar- *IEEE Transactions on Plasma Science*, 41, 2684-2690 (2013)

Particle-in-cell simulations of discharge along gas/solid interface- **S.V. Tewari**, A. Roy, A. Sharma, K. C. Mittal, D. P. Chakravarthy, A. Saxena, and N. M. Singh - *IEEE Transactions on Plasma Science*, 41, 578-584 (2013)

Simulation of Breakdown Mechanism in High Power Spark Gaps Filled with Nitrogen Gas at Atmospheric Pressure-A. Saxena, **S.V. Tewari**, N. M. Singh, A. Sharma, and K. C. Mittal - *Radiation Effects and Defects in Solids*, 170, 111-120 (2015)

First results of KALI-30 GW with 1 MV flash X-rays generation and characterization by Imaging plate- A. Sharma, A. M. Shaikh, K. Senthil, S. Mitra, R. Chandra, S. Vishnu, S. Sandeep, A. Roy, M. Rakhee, V. Sharma, M. B. Danish, T. S. Kolge, K. Ranjeet, R. Agrawal, P. C. Saroj, **S.V. Tewari**, and K. C. Mittal - *Journal of Instrumentation*, 9, P07011 (2014)

Energy Balance Aspect in KALI-30GW High Voltage Pulse Power Source-A. Sharma, S. Mitra, S. K. V. Sharma, S. Singh, **S.V. Tewari**, and K. C. Mittal - *Laser and Particle Beams*, 32, 531-535 (2014)

Explosive Emission Properties of Cathode Materials in Relativistic Electron Beam Generation-R. Chandra, A. Roy, S. Kalyanasundaram, A. S. Patel, V. K. Sharma, R. Menon, N. Pasula, R. Kumar, I. Ventizenko, A. Mashchenko, T. Kolge, **S.V. Tewari**, R. Agarwal, A. Sharma, and K. C. Mittal - *IEEE Transactions on Plasma Science*, 42, 3491-3497(2014).

Development of triggering arrangement of KALI- 30GW Marx generator-S. Mitra, T. S. Kolge, R. Agarwal, P. C. Saroj, A. Patel, K. Senthil, **S.V. Tewari**, A. Sharma, and K. C. Mittal - *Journal of Korean Physical Society*, 66, 553-557 (2015).

INTERNATIONAL CONFERENCES

Initial Stage of Underwater Electrical Wire Explosion- S. Efimov, A. Rososhek, **S.V. Tewari**, and Ya. E. Krasik - 7th Euro-Asian Pulsed Power Conference (EAPPC/ BEAMS), September 16-20, 2018, Changsha, China.

Recent Results of Electrical Explosion of Wires and Wires Arrays in Water and Glycerol-A. Rososhek, S. Efimov, M. Nitishinskiy, D. Yanuka, **S.V. Tewari**, Ya. E. Krasik, K. Khishchenko, and S. Bland -45th International Conference on Plasma Science, June 24-28, 2018, Denver, USA

Investigation of 2.45 GHz Microwave Radiated Argon Plasma under Magnetized Condition-C. Mallick, **S.V. Tewari**, R. Kumar, and M. Bandyopadhyay-22nd International Workshop on ECR Ion Sources (ECRIS), August 28-September 1,2016, Busan, South Korea

Magnetic Field Design for 2.45 GHz Negative Hydrogen PMECRIS Chamber using FEM Simulation-C. Mallick, **S.V. Tewari**, R. Kumar, and M. Bandyopadhyay-22nd International Workshop on ECR Ion Sources (ECRIS), August 28-1 September 2016, Busan, South Korea

Pulsed Flashover of Solid Dielectric Materials in Compressed Gas Environment- **S.V. Tewari**, A. Sharma, and K. C. Mittal-59th DAE Solid State Physics Symposium, 16-20 December 2014, Vellore, India

Effect on electron drift velocity and ionization coefficient along a gas-solid interface- **S.V. Tewari**, C.S. Reddy, A. Sharma, and K. C. Mittal, 6-8 February 2013, Dindigul, India

Particle-in-cell simulations of discharge along angled insulators in compressed gases **S.V. Tewari**, A. Roy, C. S. Reddy, A. Sharma, and K. C. Mittal-IEEE Pulse Power and Plasma Science Conference,16-21 June,2013, San Francisco, USA

Development of a 300kV Compact Co-axial Marx Generator Based on PFN- **S.V. Tewari**, C.S. Reddy, R. Agarwal, P. C. Saroj, A. Sharma, K. C. Mittal, and D. P. Chakravarthy-4th Euro-Asian Pulsed Power Conference (EAPPC/BEAMS), September 30-October 4, 2012 Karlsruhe, Germany

Computational Model of Discharge across a Gas/Solid Interface at High Pressure- **S.V. Tewari**, A. Roy, A. Sharma, K. C. Mittal, D. P. Chakravarthy, A. Saxena, and N. M. Singh - IEEE/Springer International Conference on Emerging Trends in Engineering and Technology, December 13-14, 2012, Trichy, India

Flash X-Ray Generation Using Folded Pulse Forming Line Based Marx Generator- **S.V. Tewari**, R. Agarwal, A. Sharma, K. V. Nagesh, and D. P. Chakravarthy-2nd International Symposium on Material Chemistry, December 7-11, 2010, Mumbai, India.

Torque Ripple Minimization of BLDC Motor with Un-Ideal Back EMF- **S.V. Tewari**, and B. I. Rani-2nd International Conference on Emerging Trends in Engineering and Technology, December 16 - 18 ,2009, Nagpur, India.