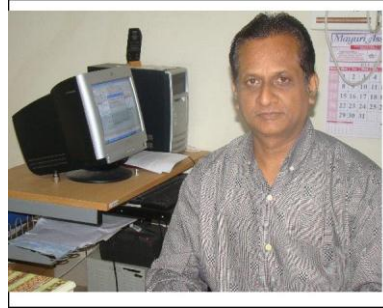


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Mr. Kalidindi Ramachandra Soma Raju

**Qualification**

M.E (Mechanical Engineering)

**Designation**

Technical Officer 'D'

**Experience**

22 years. (3 years in private industry and for the last 19 years in ARCI)

**Research areas of interest**

Surface engineering involving sol-gel coatings, electrospark coatings, microarc oxidation coatings and thermal spray such as detonation spray coatings.

**List of journal publications**

1. K.R.C. Soma Raju, N.H. Faisal, D. Srinivasa Rao, S.V. Joshi and G. Sundararajan, "Electro-Spark Coatings for Enhanced Performance of Twist Drills" Surface & Coatings Technology, Vol. 202, p1636-1644, 2008.
2. L. Ramakrishna, K. R. C. Somaraju and G. Sundararajan, "The Tribological Performance of Ultra-Hard Ceramic Composite Coatings Obtained through Microarc Oxidation", Surface & Coatings Technology, Vol.163-164, p 484-490, 2003.
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5. K.R.C.Soma Raju, R. Subasri, "Decorative and Multi-functional Hybrid Sol-Gel Coatings on Stainless Steels" P 3-4, Surface Engineering Bulletin Vol 2, Issue 2, July 2009.

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10. L. Sowntharya, G. Ravi Chandra, K.R.C. Soma Raju, R. Subasri. "Effect of addition of surface modified nanosilica into silica-zirconia hybrid sol-gel matrix". *Ceramics International* 39 (2013) 4245-4252.
11. N. Kumar, J. Jyothirmayi, K. R. C. Somaraju, V. Uma, R. Subasri, "One Step Anodizing cum Sol-Gel coating on conductive surface by electrolytic process" (to be communicated).
12. K. Jeevajothi, R.Subasri, K.R.C.Soma Raju, "Transparent, non-fluorinated, hydrophobic silica coatings with improved mechanical properties", *Ceramics International* 39 (2013) 2111–2116.
13. K.R.C.Soma Raju, R.Subasri, "Effect of Heat Treatment on Mechanical and Corrosion Properties of Low Temperature Curable Sol-Gel Silica-Zirconia Nanocomposite Coatings" *SE bulletin* 2012.
14. Priya A. Mathews, Soma Raju R.C. Kalidindi, Sanjay Bhardwaj and Raghavan , Subasri "Sol-Gel Functional Coatings for Solar Thermal Applications: A Review of Recent Patent Literature", *Recent Patents on Materials Science* 2013, Bentham Science Publishers, Vol6, No 3, 000-000.

## List of patents

1. "A Device for controlling the On and Off time of the metal oxide semiconductor field effect transistor (Mosfet), a device for spark coating the surfaces of metal work piece incorporating the said control device and a method of coating metal surfaces using the said device."  
Patent number: 1610/DEL/2005  
Date: 21-06-2005 Indian

K.R.C. Soma Raju, Ch. Sambasiva Rao, Ribaalko Alexander Vasilyevich

2. "Device for controlling the on & off time of the metal oxide semiconductor field effect transistor (Mosfet), a device for spark coating the surfaces of metal work piece incorporating the said control device and a method of coating metal surfaces using the said device."  
Patent number: 2011/0290764 A1  
Date: 01-12-2011  
US  
K.R.C. Soma Raju, Ch. Sambasiva Rao, Ribaalko Alexander Vasilyevich
  
3. An Improved Composition for Coating Metallic Surfaces and a Process for Coating such surfaces using the Composition  
Patent number: 620/DEL/2010  
Date: 17-3-2010 Indian  
  
Kalidindi Rama Chandra Soma Raju, Raghavan Subasri, Adduru Jyothirmayi, Gadhe Padmanabham
  
4. Improved Scratch And Abrasion Resistant Compositions For Coating Plastic Surfaces, A Process For Their Preparation And A Process For Coating Using The Compositions  
Patent number: 2427/DEL/2010  
Date: 12-10-2010 Indian  
  
Gururaj Telasang, Kalidindi Rama Chandra Soma Raju, Raghavan Subasri, Gadhe Padmanabham
  
5. An improved abrasion resistant and hydrophobic composition for coating plastic surfaces and a process for its preparation  
Patent number: 1278/ DEL/ 2011  
Date: 02-05-2011 Indian  
  
Kalidindi Rama Chandra Soma Raju, Dendi Sreenivas Reddy, Raghavan Subasri, Gadhe Admanabham
  
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### Conference presentations and publication in proceedings

1. Debajyothi Sen, K. R. C. Somaraju, D. Srinivasa Rao and G. Sundararajan, "Influence of FEP Additions on the Properties of WC-Co Coatings Obtained by Detonation Spray Coating", Proceedings of Surface Modifications Technologies SMT-XIII, (eds.) T S Sudarshan, K A Khor and M Jeandin, Singapore, p 71-81, 1999.
2. G D. Srinivasa Rao, Debajyothi Sen, K. R. C. Somaraju, S Ravi Kumar, N. Ravi and G. Sundararajan, "The Influence of Powder Particle Velocity and Temperature on the Properties of Cr<sub>3</sub>C<sub>2</sub>-25 NiCr Coating Obtained by Detonation-Gun", Proceedings of the 15th International Thermal Spray Conference, France, p 385-393, 1998
3. G. Sundararajan, D. Srinivasa Rao, Debajyothi Sen and K. R. C. Somaraju, "Tribological Behaviour of Thermal Sprayed Coatings", Proceedings of Surface Modification Technologies XI, (eds.) T S Sudarshan, K A Khor and M Jeandin, France, p 872-886, 1998
4. G. Sundararajan, K. R. C. Somaraju, and D. Srinivasa Rao, "The Prospects for the Development of High Performance Alumina Coatings using Detonation Gun Technique", Proceedings of Surface Modification Technologies X, (eds.) T S Sudarshan, K A Khor and M Jeandin, Singapore, p 369-384, 1997.
5. K. R. C. Somaraju, D. Srinivasa Rao, G. Sivakumar, Debajyothi Sen, G. V. Narasimha Rao and G. Sundararajan, "The Influence of Powder Characteristics on the Properties of Detonation Sprayed Cr<sub>3</sub>C<sub>2</sub>-25NiCr Coatings", Proceedings of 2nd International Thermal Spray Conference (ITSC), (eds.) CC Berndt , p 309-315, 2000.
6. P Saravanan, K. R. C. Somaraju, D. Srinivasa Rao, V Selvarajan, Shrikant V. Joshi and G. Sundararajan, "A Comparative Study of the Performance of Two Diverse Detonation Spray Systems", Proceedings of Surface Modifications Technologies SMT-XIII, (eds.) T S Sudarshan, K A Khor and M Jeandin, Singapore, p 195-205, 1999.
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9. K.R.C.Soma Raju "Principles and Applications of ESC technology" delivered at SERC-NAM-School on Surface Engineering July 2005 organised by ARCI, Hyderabad.

10. K.R.C.Soma Raju, G.Sundararajan et.al “Wear Performance of Hardfacing Materials Deposited Using ESC Technique” delivered at IIT-NMD-ATM 2005, conducted by Indian Institute of Metals, Chennai.
11. K.R.C. Somaraju, R. Subasri, A. Jyothirmayi, T. Gururaj, G. Padmanabham “UV-Curable Primer-cum-Paint System for Mild Steels based on Sol-Gel Coating Technology” Mobility Congress 2009, Society for Automotive Engineers SAEINDIA, 13-15 Dec. 2009, Chennai.
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1. T.Gururaj, R.Subasri, K.R.C.Soma Raju and G.Padmanabham, “Effect of Plasma Surface Activation on Mechanical Properties of Sol-gel Coatings on Plastic Substrates”, delivered at International Conference on Advanced Functional Materials (ICAFM 2009)”, Dec. 09-10, 2009, Thiruvananthapuram.
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3. L. Sowntharya, K.R.C. Soma Raju, R. Subasri, G. Padmanabham, Investigations on the mechanical properties of sol-gel hybrid nanocomposite hard coatings on Polycarbonate, International Conference On Nanoscience And Technology,(ICONSAT -2012).
4. Soma Raju K.R.C, Srinivas Reddy D, Jyothirmayi A, and Subasri R, “Effect of heat treatment on mechanical and corrosion properties of low temperature curable sol-gel silica-zirconia nano composite coatings”, 16th International Sol-Gel Conference, August 28th– September 2nd, 2011 Department of Materials Science and Engineering, Zhejiang University, Hangzhou 310027, Zhejiang Province, P.R. China.
5. K. R. C. Soma Raju, D. Sreenivas Reddy, R. Subasri, G. Padmanabham , “Sol-Gel Derived Solar Selective Coatings for Solar Thermal Applications”, at International Conference on Environment and Energy, December 15th-17th 2014 organised by Centre for Environment & Centre for Alternative Energy Options, Institute of Science and Technology, Dept. of Mechanical Engineering, Jawaharlal Nehru Technological University, Hyderabad

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### **Contribution to books**

1. K.R.C.Soma Raju, "Electrosaprk coatings" chapter in "Surface Engineering", (eds.) D. Srinivasa Rao, Srikanth V. Joshi, Centre for Science and Technology of the Non-aligned and other Developing Countries, NAM S&T S & T Centre, 2010, P286-337.
2. K.R.C. Soma Raju and R. Subasri, "Sol-Gel Nanocomposite Hard Coatings" chapter in "Anti-Abrasive Nanocoatings: Current and future applications", Woodhead Publishing Limited preparing for Chandos publishing, TBAC Business Centre, Avenue 4, Station Lane, Witney, Oxford OX28 4BN. Communicated.

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