LIST OF PUBLISHED PAPERS, INVITED & PLENARY PRESENTATIONS AND ISSUED PATENTS


3. “Robust superconducting FeSe$_{0.5}$Te$_{0.5}$ coated conductors at 30 tesla,” Weidong Si, Su Jung Han, Xiaoya Shi, Steven N. Ehrlich, J. Jaroszynski, Amit Goyal, and Qiang Li, *Nature Communications*, 4, Article number: 1347, 2013, doi:10.1038/ncomms2337.


46. “Extraction of misorientation components from the total misorientation at grain boundaries using electron diffraction in a Y0.9Sm0.1Ba2Cu3O7 film,” J. Li and A. Goyal, J. of Am. Cer. Soc., 91 (2008) 3045-3051.


190. “Fabrication of long lengths of epitaxial buffer layers on biaxially textured-Ni substrates using a continuous reel-to-reel dip-coating unit,” M. Paranthaman, T.G. Chirayil, F.A. List, X. Cui, A. Goyal,


331."Stacking Faults Associated with 211 Particles and other Likely Pinning Centers in Melt-processed YBa2Cu3O7-"," A. Goyal, Z. L. Wang, K. B. Alexander and D. M. Kroeger, Published in the Proceedings of the *International Workshop on Superconductivity*, June 23-26, 1992, Honolulu, Hawaii, U. S. A.


**LIST OF BOOKS EDITED**


**CITATION ANALYSIS**

a. An independent analysis of the field of high-temperature superconductors conducted by Thompson-Reuters’s Essential Science Indicators (ESI) and ScienceWatch.com, which tracks global trends and performance in research, ranks Amit Goyal No. 1 worldwide in the total number of citations during the last decade (1999-2009). He also ranks no. 4 worldwide in the total number of papers published in same timeframe (this is still the highest number of papers by anyone outside of Japan). A recent interview with Amit is posted on ScienceWatch (http://sciencewatch.com/ana/st/hts/09maySTHTSGoya/).

**LIST OF PLENARY & INVITED PRESENTATIONS**


8. **Invited Plenary Speaker**, BIT’s 4th New Energy Forum to be held during September 21-23, in Qingdao, China.


15. **Invited Speaker**, DOE Headquarters, Inaugural lecture in a high-profile Science Lecture Series initiated by DOE Secretary Steven Chu.


25. **Invited Keynote or Plenary Speaker**, Spring 2010 Meeting of the Ohio Section of the APS, April 30 – May 1, 2010, Flint, MI.


32. **Invited Speaker**, College of Engineering, Oklahoma State University, June, 2009.
34. **Invited Speaker**, 2008 Coated Conductor & Applications Workshop, held in Houston, TX, December 4-6, 2008.
42. **Invited Keynote or Plenary Speaker**, 2007 International Workshops on Coated Conductors for Application (CCA2007) held at the Suites Hotel, Jeju island in Korea, November 8-10, 2007. Requested to represent the USA and talk about the progress made in the US on coated conductors.
44. **Invited Plenary Speaker**, HK IAS-USA ICMR Workshop on Advanced Materials, Hong-Kong University of Science and Technology (HKUST), Hong-Kong, Sept. 12-15th, 2007.
45. **Invited Speaker**, Mechanical Engineering Department, Hong-Kong University of Science & Technology (HKUST), Hong-Kong, Sept, 2007.
46. **Invited Speaker**, 2007 Materials Science & Technology (MS&T 2007), Sept. 16-20, Detroit, MI, USA.
49. **Invited Speaker**, 2007 HTS Wire Development & Applications Workshop, Jan. 16-17, Panama City, Florida.
51. **Invited Speaker**, National Physical Laboratory, New Delhi, India, Dec, 1, 2006.
52. **Invited Speaker**, Indian Institute of Technology, New Delhi, India, Nov. 29, 2006.
57. **Featured Invited or Plenary Speaker**, National Nano Engineering Conference, Nov. 9-10, Boston, MA.
59. **Key Invited Overview or Plenary Speaker**, International Workshop on Coated Conductors for Applications, CCA 2006, held at Schlosshotel Monrepos, Ludwigsburg, Germany, July 03 to 05, 2006.
62. **Invited Speaker**, 14th Annual International Conference on Composites/NANO Engineering, ICCE-14, July 2-8, 2006, Broomfield, CO.
63. **Invited Speaker**, College of Engineering, University of New Brunswick, Canada, June, 2006.
64. **Invited Speaker**, International Workshop on Coated Conductors for Applications (CCA2005) to be held at La Posada Hotel, Santa Fe, NM USA, December 4-7, 2005.
69. **Invited Speaker**, Korean Electrochemical Research Institute (KERI), Changwon, South Korea, August, 2005.
72. **Invited Speaker** at the Symposium titled 'Functional Ceramic Materials and Thin Films' to be held during the 2005 International Conference on Materials for Advanced Technologies (Singapore) scheduled for 3-8 July 2005.
73. **Invited Speaker**, 2005 MRS Spring Meeting, March 28-April 1, San Francisco, CA.
77. **Invited Speaker**, 12th Annual International Conference on Composites/NANO Engineering (ICCE-12), August 1-6, Tenerife, Canary Islands, Spain, 2005.
80. **Invited Speaker**, 2004 American Ceramic Society Annual Meeting, held in Indianapolis, IN, April 19-21, 2004.
82. **Invited Speaker**, International Workshop "High Temperature Superconductors and Novel Inorganic Materials Engineering" (MSU-HTSC VII), held in Moscow, Russia, on June 20-25, 2004.
84. **Invited Plenary Speaker**, International Coated Conductor Workshop, held in Orta, Italy, September 12-13, 2003. Requested to represent the USA and talk about the progress made in the US on coated conductors.
92. **Invited Speaker**, Pohang University of Science & Technology, Department of Physics, Pohang Superconductivity Center, Pohang, Korea, Aug. 23, 2002.
96. **Invited Speaker**, ASM Local Chapter, March 2002.
98. **Invited Speaker**, American Ceramic Society Meeting, April, 2002.
100. **Invited Speaker**, E-Source Conference, November 13-16, 2000, Colorado Springs, CO.
101. **Invited Speaker/Lecturer**, Short course on Control of Grain Boundary Networks in Polycrystalline Functional Materials and on High Temperature Superconductors, University of Talca, Chile, Dec. 11-21, 2000.
106. **Invited Speaker**, Gordon Conference on Grain Boundaries in Ceramics, held on Aug. 6-11, 2000, Meriden, NH.
109. **Invited Speaker**, 2000 ASM Fall Meeting, Symposium on Texture Analysis for Process and Quality Control, Oct. 9-12, St. Louis, MO.
110. **Invited Speaker**, 2000 TMS Fall Meeting, Symposium on Electron Backscatter Diffraction, Oct. 9-12, St. Louis, MO.


120. **Invited Speaker**, 1999 Electron Microscopy Meeting (EMSA), to be held in August, 1999, Portland, OR.


127. **Invited Speaker**, Fifth International Workshop on High Superconductors, held March 24-29, Moscow, Russia, 1998.


130. **Invited Speaker**, 1998 Electron Microscopy Meeting (EMSA), held in July’98, Atlanta, GA.


132. **Invited Speaker**, Harvard University, Materials Science Center, Monday, Sept. 8, 1997.


139. **Invited Speaker**, University of Kansas, August, 1997.


161. **Invited Speaker**, 1994 Midwest Superconductivity Consortium's Workshop on Superconductivity, Aug. 11-12, 1994 at Purdue University, IN, talk titled “Effect of Grain Boundaries on Critical Current Density in HTSC Materials”, A. Goyal et al.

162. **Invited Speaker**, Third Workshop on Processing of Thallium Oxide High Temperature Superconductors, talks titled " Processing of Powder-in-tube Tl-1223 Superconductors" and


**COMPANIES FOUNDED / COMMERCIALIZATION IMPACT**

- **TexMat LLC**, a Delaware Corporation. This company is an IP holding company, has a consulting part to it and spins out other entities or companies based on the IP it holds or owns.
- **TapeSolar Inc.**, a Delaware C-Corporation is the first of these companies. TapeSolar Inc. is developing the next generation, flexible, high-performance, low-cost photovoltaic cells based on III-V and II-VI semiconductor materials grown heteroepiaxially on single-crystal-like, large-area, flexible, biaxially textured substrates. TapeSolar Inc. is a private equity funded company.
- Research has lead to world-wide commercialization of high-temperature superconducting wire manufacture.

**PATENTS - SUMMARY**

Over 150 patent applications and/or invention disclosures filed.

**81 issued patents** (65 US and 16 International patents).

**65 US patents issued to date:** US Patent Nos. 5, 739, 086; 5, 741, 377; 5, 846, 912; 5, 898, 020; 5, 964, 966; 5, 958, 599; 5, 968, 877; 6, 077, 344; 6, 106, 615; 6, 114, 287; 6, 150, 034; 6, 156, 376; 6, 151, 610; 6, 159, 610; 6, 180, 570; 6, 235, 402; 6, 261, 704; 6, 270, 908; 6, 331, 199; 6, 375, 768; 6, 399, 154; 6, 451, 450; 6, 447, 714; 6, 440, 211; 6, 468, 591; 6, 486, 100; 6, 599, 346; 6, 602, 313, 6, 607, 313; 6, 607, 838; 6, 607, 839; 6, 610, 413; 6, 610, 414; 6, 635, 097; 6, 645, 313; 6, 663, 976; 6, 670, 308; 6, 675, 229; 6, 716, 795; 6, 740, 421; 6, 764, 770; 6, 784, 139; 6, 790, 253; 6, 797, 030; 6, 846, 344; 6, 782, 988; 6, 890, 369; 6, 902, 600; 7, 087, 113; 7, 258, 928; 7, 510 997; 7, 683, 010; 7, 879 161; 7, 906, 229; 7, 919, 435; 8, 034, 745; 8, 119, 571; 8, 178, 221; 8, 210, 420; 8, 227, 082; 8,424,745; 8,481,460; 8, 518, 526; 8, 536, 098; 8, 685, 549; 8, 748, 349 and 8, 748, 350.

A majority of these issued patents have been licensed during the course of the last decade and a half!
Over 15 US patents presently pending.
Over 20 International patents pending.

LIST OF PATENTS

66. A. Goyal, “(100)<100> or 45°-rotated {100}<100>, semiconductor-based, large-area, flexible, electronic devices,” US Patent 8,178,221, May 15, 2012.
74. A. Goyal and Junsoo Shin, “Nanocomposites for ultra high density information storage, devices including the same, and methods of making the same,” US Patent 8,685,549, April 01, 2014.
95. A. Goyal and Junsoo Shin, US Patent Application – 12/956598, “Nanocomposites for ultra high density information storage, devices including the same, and methods of making the same”.


- **Trademark:** RABITS™ (Rolling-Assisted-Biaxially-Textured-Substrates)
- **Trademark:** SSIFFSTM (Sapphire Single-crystal Faceted Fiber Substrates)