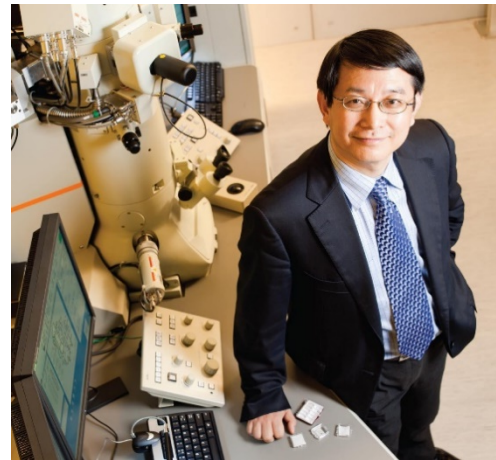


Biography

Professor Jian Lu

- *Dip Ing, MSc, PhD (UTC), Habilitation (Sorbonne University (Université Pierre et Marie CURIE)), Fellow SEM, Fellow HKAES, Fellow HKIS, Academician: National Academy of Technologies of France*
- *Vice-President (Research and Technology) and Dean of Graduate Studies*
- *Chair Professor of Mechanical Engineering, Department of Mechanical and Biomedical Engineering*
- *Director of Centre for Advanced Structural Materials*



Research Interests

- *Biomaterials (Ti, Zr, Mg, NiTi, Co, Hydroxyapatite, ZrO₂) and biomechanics*
- *Integration of advanced materials and processing through computational simulation and computer aided design*
- *Mechanical characterization and processing of nanomaterials and advanced structural materials*
- *Experimental mechanics and residual stress*

Educational Qualifications

1993 **Habilitation**, Mechanics, **Sorbonne University (Université Pierre et Marie CURIE)**

1986 **Doctor (Ph.D)**, Materials Science and Applied Mechanics, **University of Technology of Compiegne (UTC)**

1984 **Diplome d'Etude Approfondie (DEA) (MSc)**, Materials Science, **University of Technology of Compiegne (UTC)**

1984 **Engineer Diploma, Mechanical Engineering (MEng)**, and stream: Materials and Technology Innovations, **University of Technology of Compiegne (UTC)**

1979 National scholarship (jan. 79) for studying abroad, Intensive French Language Study at **University of Technology of Compiegne (UTC)**

1978 **Peking University**, Department of Chemistry

Professional Experience

Sep 2010 - Present	City University of Hong Kong <ul style="list-style-type: none">• Vice-President (Research and Technology) and Dean of Graduate Studies (since 15 Nov 2013)• Chair Professor of Mechanical Engineering• Director of Centre for Advanced Structural Materials (since Aug 2011)• Director of Hong Kong Branch of National Precious Metals Material Engineering Research Centre (since Dec 2015)• Acting Dean of School of Veterinary Medicine (14 Mar 2014 - 1 Mar 2015)• Dean of College of Science and Engineering (2010-14 Nov 2013)
2005 - 2010	The Hong Kong Polytechnic University <ul style="list-style-type: none">• Chair Professor of Mechanical Engineering• Head of Department of Mechanical Engineering• Associate Dean of Faculty of Engineering (Feb 2008-Aug 2010)
1994 - 2005	University of Technology of Troyes (UTT) <ul style="list-style-type: none">• Professor (Promoted to 1st class since 1999 by the National Committee)• Head of the Mechanical Systems Engineering Department (1994 - 2004)• Director of the Mechanical Systems and Concurrent Engineering Laboratory (LASMIS, FRE CNRS 2719, CNRS and Ministry of Education)
1995 - 1999	Co-leader of the UTC (Compiègne)-UTT (Troyes) Doctor Program in Science of Mechanics for Engineer
1993 - 1994	Professor (Part time), Mechanical Systems Division Mechanical Engineering Department, University of Technology of Compiègne
1987 - 1994	Senior Research Engineer and Head of the Residual Stress and Coating Adhesion Laboratory, Material Department, CETIM (French Technical Center for Mechanical Industries)

Awards and Honors

- **French Knight Order of National Merit** (Chevalier de l'Ordre National du Mérite) in 2006
- **Gold Medal with Mention** in the 56th World Exhibition of Innovation, Research and New Technologies at Brussels Expo (2007)
- **Fellow of Society for Experimental Mechanics (SEM)**, USA (2010)
- **Elected as Academician, National Academy of Technology of France (NATF)** (2011)
- **Elected as Fellow, Hong Kong Academy of Engineering Sciences (HKAES)** (2013)
- **Elected as Fellow, Hong Kong Institute of Science (HKIS)** (2013)
- **French Knight of the National Order of Légion d'Honneur (Chevalier de la Legion D'honneur)** in 2017
- **Received the 12th Guanghua Engineering Science and Technology Award in 2018**

Professional Affiliations

Professor Lu serves or served as a member of editorial board:

- The Journal of Strain Analysis for Engineering Design, IMechE (Member of Editorial Board)
- CMC: Computers, Materials & Continua (Member of Editorial Board)
- Science China Technological Sciences (Member of Editorial Board)
- ACTA MECHINICA Solida Sinica (Member of Editorial Board)
- Theoretical & Applied Mechanics Letter (Associate Editors-in-Chief)
- International Journal of Mechanics and Materials in Design (Member of Editorial Board)
- ACTA MECHINICA Sinica (Editor)
- Experimental Mechanics, SEM, USA (Associate Technical Editor)
- "Handbook of Measurement of Residual Stresses" organized by SEM. The Fairmont Press and Prentice Hall (Editor)
- "Residual Stress and Mechanical Design" and "Residual Stress: Manufacturing and Materials Processing", two handbooks organized by Society for Experimental Mechanics (Editor)
- "Non-Uniform Plastic Deformation Processing", Spring Nature Singapore Pte Ltd (Editor) (Dec 2017)

Past and Actual National and International Appointments

- **Expert of French Ministry of Education (DSPT8, Engineering field)** for the evaluation of the research laboratories, research programs and education programs
- **Overseas Assessor of the Chinese Academy of Sciences** (since 1999)
- **Member of the Expert Panel** (29 members) for the preparation of EU document entitled: "Future needs and challenges for materials and nanotechnology research" in Oct 2001 for the preparation of 6th EU Research Program (2003 - 2006)
- **Member of International Experts Group** (10 members for all the scientific fields) of Chinese MOST (Ministry of Science and Technology) (2004 - 2006)

- **Expert of Evaluation** for EU research and technology development programs (GROWTH and CRAFT) (2000 - 2004)
- **Member of International Advisory Committee** of the First Chinese National Laboratory: Shenyang National Laboratory for Materials Science
- **Chairman** (1994 - 1998) and **Vice-Chairman** (1990 - 1994) of the Residual stress division of the Society for Experimental Mechanics (SEM, USA)
- **Chairman of Managing Board** of the Sino-European School of Technology (UTSEUS a joint structure of three French Universities and Shanghai University) (2005 - 2008)
- **Special Consultant of Chairman of Managing Board** of the Sino-European School of Technology (until 2008)
- **Expert Panel Member** of the Hong Kong Automotive Parts and Accessory Systems (APAS) R & D Centre hosted by the Hong Kong Productivity Council (until 2012)
- **Overseas Panel Member of Engineering and Material Sciences** of the NSF China (2011 and 2012)
- **Panel Member of Engineering Panel** of the Research Grants Council (RGC) of Hong Kong, China (Jan 2012 - Oct 2017)
- 香港工業專業評審局 **2012-14 年度董事局成員 Member of Board of Directors** of The Professional Validation Council of Hong Kong Industries (Jul 2012 - Jun 2014)
- 香港工業專業評審局 **2012 年「榮譽院士選舉」、「院士進升計劃」及「副院士推動計劃」終審委員會委員**
- 香港工業專業評審局 **2016 年榮譽院士選舉及資歷院士參選計劃終審委員會委員**
- 香港工業專業評審局 **學術顧問委員會成員** (2016 - 2018 年度) 及 (2018 - 2020 年度)
- **External Assessor of Admission Panel for the Technology Business Incubation Programme (Incu-Tech/Incu-Bio Programme)** of the Hong Kong Science and Technology Parks Corporation (HKSTPC), Hong Kong, China (Aug 2012 - Jul 2014)
- **Member of Gordon Research Committee's Hong Kong Advisory Board** of the Gordon Research Conference (since Jan 2015)
- **Member of the 9th & 10th Nuclear Safety Consultative Committee** of the Guangdong Nuclear Power Station and the Lingao Nuclear Power Station, Guangdong, China
- **Preliminary Judging Panel Member** of the 2013 Hong Kong Awards for Industries: Technological Achievement of Hong Kong Science and Technology Parks Corporation (HKSTPC), Hong Kong, China
- **International Science and Technology Committee Member** of Alstom, France
- **External Reviewer** for the Centre for Engineering Materials and Reliability (CEMAR) of HKUST Fok Ying Tung Research Institute (FYTRI), Nansha, China (since Sep 2013)
- 中國力學學會「中國力學科學技術獎」**海外通訊評審專家** (15 Oct 2014 - 14 Oct 2019)
- **第三屆學術委員會副主任**, 湘潭大學低維材料及其應用技術教部重點實驗室 (18 Oct 2014 - 17 Oct 2019)
- **Member** of Innovation and Technology Fund Research Projects Assessment Panel under the Innovation & Technology Fund (1 Jan 2015 - 31 Dec 2018)
- **Expert Assessor of the Australian Research Council** for assessment for major Australian Research Council schemes in 2015/2016
- **Member** of University Advisory Board of HKUST MIT Research Alliance Consortium (since 2015)
- **Member** of the Innovation and Sustainability Board, Bouygues Construction (since 2014)

- **President** of National Evaluation Committee of ENSTA ParisTech (National School for Advanced Techniques), The High Council for Evaluation of Research and Higher Education (HCERES) (25 - 29 Jan 2016 & 6 Apr 2016)
- **President** of Joint Committee with the Evaluation Committee of the Ecole Polytechnique; The High Council for Evaluation of Research and Higher Education (HCERES) (25 - 29 Jan 2016 & 6 Apr 2016)
- **Member** of the 15 Jul 2016 Preliminary Judging Panel of the 2016 Hong Kong Awards for Industries: Technological Achievement, Hong Kong Science and Technology Parks Corporation (HKSTP)
- **Member** of the Research Grant Council (RGC) of Hong Kong, China (1 Jul 2016 - 30 Jun 2021)
- **Council Member** of Hong Kong Academy of Engineering Sciences
- **Council Member** of Hong Kong Institution of Science (3 Dec 2016 - Nov/Dec 2018)
- **Member** of Hong Kong Institution of Engineers (Special Steering Committee on establishing nuclear engineering discipline) (since Oct 2016)

External Research project grants received in Hong Kong since 2007

Project Title with Prof. Jian LU as PI	Source of funding	Period
1. Investigation of High Strength, High Ductility Nanostructured Material	GRF-RGC	2008-2011
2. Study of the Role of Residual Stress Distribution on the Mechanical Behaviour of the Metallic Glass	GRF-RGC	2009-2013
3. Design and Realization of Structural Materials with High Strength and High Ductility	RGC Collaborative Research Fund	2009-2013
4. Study of Fracture Mechanisms of Ultrahigh Strength Steels with Nanometer Scale Twins	GRF-RGC	2011-2014
5. Control and Impact of Residual Stresses on the Mechanical Behaviour of Bulk Metallic Glasses	RGC France/Hong Kong Joint Research Scheme	2008-2010
6. Development of SMAT Platform for Biomedical Device and Implants Using High Diffusion Properties Material	HK Innovation and Technology Support Programme	2007-2009

Project Title with Prof. Jian LU as PI	Source of funding	Period
7. Development of the Layered Nanostructured Metallic Sheet/Plate for Structural Applications	HK Innovation and Technology Support Programme (NAMI)	2008-2010
8. Residual Stress Measurement Dedicated to Structural Aeronautical Composite Part with Organic Matrix	Airbus	2007-2010
9. Study of the Mechanical Properties of Advanced Materials with Nanotwins	Croucher Foundation, CAS_Croucher Funding Scheme for Joint Laboratories	2010-2015
10. Synthesis and High Performance of Hierarchical Nanostructured Metal	MOST-973	2012-2016
11. Development of Advanced Structural Steel with High Density Nano/Submicron Twin for Lightweight Products	ITF	2011-2014
12. Enhancement of Hardness Property of Precious Metal of Various Purity for Jewellery Industry by Using Surface Nanocrystallization	ITF	2012-2016
13. Development of High-performance Energy Absorption Structures Based on the Structure Optimization and Material Enhancement	ITF	2014-2016
14. High-performance TiO ₂ -based Pollutant Degradation Devices Manufactured Directly From Ti Foil Enabled By The Surface Mechanical Attrition Treatment	ITF	2014-2016
15. Research & Development of the key technology for improving aircraft bearing fatigue performance	Shenzhen Technology Research Project	2015-2017

List of Granted Patents

Title of Invention	Country	Patent Number	Publication Date (Granted)	Inventors
1. 一種金屬材料表面機械納米化裝置	China	ZL 99250778.2	2000	
2. 一種金屬材料表面納米層的製備方法	China	ZL 99122670.4	2003.01.22	LU Ke, LU Jian
3. Procédé mécanique de génération de nanostructures et dispositif mécanique e generation de nanostructures	France	49-01122980.2, FR2812284	2003	LU Jian, LU Ke
4. Procédé de traitement de nanostructures et dispositif de traitement de nanostructures	France	50-01122981.0, FR2812285	2003	LU Jian, LU Ke
5. Procédé de génération de nanostructures et dispositif génération de nanostructures	France	51-01122979.9, FR2812286	2003	LU Jian, LU Ke
6. 形成納米結構方法和專用設備	China	ZL 01122979.9	2004	
7. 形成納米結構的機械方法和專用機械設備	China	ZL 01122980.2	2004.12.15	LU Ke, LU Jian
8. 形成納米結構處理方法和專用處理設備	China	ZL 01122981.0	2004	
9. Prodede et dispositif de generation de nanostructures	Europe	EPI 307 598 B1	2005	LU Jian, LU Ke
10. Mechanical method for generating nanostructures and mechanical device for generating nanostructures	USA	US 7,147,726	2006.12.12	LU Jian, LU Ke
11. Device for generating nanostructures	USA	US 7,300,622	2007.11.27	LU Jian, LU Ke
12. High Temperature Sustainable Fiber Bragg Gratings	USA	US 7,835,605	2010.11.16	WANG Dongning, LI Yuhua, LU Jian
13. Method for generating nanostructures and device for generating nanostructures	USA	US 7,691,211	2010.04.06	LU Jian, LU Ke

Title of Invention	Country	Patent Number	Publication Date (Granted)	Inventors
14. Method of making a nanostructured austenitic steel sheet	USA	US 8,409,367	2013.04.02	LU Jian, CHEN Aiying
15. Construction structure and method of making thereof	USA	US 8,578,670	2013.11.12	WU Yufei, LU Jian
16. Method of Making a Composite Steel Plate	USA	US 8,752,752	2014.06.17	LU Jian, ZHANG Junbao , CHEN Aiying
17. Construction structure and Method of Making Thereof	USA	US 9,010,047	2015.04.21	WU Yufei, LU Jian
18. Method of Making Use of Surface Nanocrystallization for Building Reinforced Construction Structure	USA	US 9,021,755	2015.05.05	WU Yufei, LU Jian
19. Structure of Energetic Materials and the Method for Preparing Thereof	USA	US 9, 353,021	2016.05.31	ZHANG Kaili, LU Jian
20. Method of Fabricating Improved Porous Metallic Material and Resulting Structure Thereof	USA	US 9, 518,335	2016.12.13	ZHANG Jie, LI Yang Yang, LU Jian
21. Nanostructured-lattices produced by surface mechanical attrition treatment method	USA	US9,517,545	2016.12.13	LU Jian, PHU Son Mai, CHUN Sheng Wen
22. Application of the newly developed technology in stainless steel for biomedical implant	USA	US9,579,772	2017.02.28	LU Jian, WANG Huaiyu
23. Apparatus and a method for surface processing a metallic structure	USA	US9,670,561	2017.06.06	LI Ying, LU Jian
24. Surface Mechanical Attrition Treatment (SMAT) Methods and Systems for Modifying Nanostructures	USA	US9,809,893	2017.11.17	Cheistopher Michael LEE, LI Yang Yang, LU Jian
25. Etching in the Presence of Alternating Voltage Profile and Resulting Porous Structure	USA	US9,840,789	2017.01.26	ZHANG Jie, LI Yang Yang, LU Jian

List of Filed Patents

Title of Invention	Country	Application Number	Filed Year	Inventors
1. Porous Framework and Method For Its Manufacture	USA	13/940,918	2013.07.12	TSANG Chun Kwan, LU Jian, LI Yang Yang
2. 用於處理金屬結構的表面的裝置和方法	China	201410720455.0	2014.12.02	LU Jian, LI Ying
3. 用於牙齒結構的介質以及製造用於牙齒結構的介質的方法 / A Medium for a Dental Structure and a Method of Producing a Medium for a Dental Structure	China	201410841237.2	2014.12.30	LU Jian, NIU Xinrui, CHEN Bing
4. Nanostructured-Lattices Produced by Surface Mechanical Attrition Treatment Method	USA	14/411,102	2014.12.24	LU Jian, MAI Phu Son, WEN Chun Sheng
5. 含能材料的結構及其製備方法	China	201510041001.5	2015.01.27	LU Jian, ZHANG Kaili
6. Multistable Shell and a Method for Making Thereof	USA	15/165,639	2015.05.26	LU Jian, HE Xiaoqiao, YI Shenghui
7. 修改納米結構的表面機械研磨處理(SMAT)方法和系統	China	201510303226.3	2015.06.05	LEE Christopher Michael; LI Yangyang, LU Jian
8. A Medium for a Dental Structure and a Method of Producing a Medium for a Dental Structure	USA	14/751,575	2015.06.26	LU Jian, CHEN Bing, HU Yonglong, NIU Xinrui
9. A Medium for a Dental Structure	USA	14/835,870	2015.08.26	LU Jian, CHEN Bing, NIU Xinrui
10. 微合金化黃金	China	201510252942.3	2015	LU Jian TAM Daniel
11. 多孔架構及其制造方法	China	201480038571.2	2016.01.05	LI Yangyang, LU Jian,

Title of Invention	Country	Application Number	Filed Year	Inventors
				TSANG Chun Kwan
12. Method for Treating a Surface of a Metallic Structure	International	PCT/CN2016/084027	2016.05.31	LI Yangyang, LU Jian, ZHAN Yawen
13. 用于牙齒結構的媒介物和制備用于牙齒結構的媒介物的方法	China	2016103804 89.9	2016.06.01	CHEN Bing, HU Yonglong, NIU Xinrui, LU Jian
14. Material for an Electronic Device	USA	15/188,181	2016.06.21	WANG Aiwu, LI Yangyang, LU Jian
15. 多穩態結構及其制備方法	China	2016106180 36.5	2016.07.29	YI Shenghui, HE Xiaoqiao, LU Jian
16. Metallic Structure and a Method for Use in Fabricating Thereof	USA	15/345,863	2016.11.08	WU Ge, LU Jian
17. Metal Material and a Method for Use in Fabricating Thereof	USA	15/349,318	2016.11.11	WU Ge, LU Jian
18. Method of Making Carbon Nanotubes Doped with Iron, Nitrogen and Sulphur	USA	15/459,202	2017.03.15	ZENG Shanshan, LI Yangyang, LU Jian
19. Material for an Electronic Device	International	PCT/CN2017/077451	2017.03.21	LU Jian, LI Yangyang, WANG Aiwu
20. Energy Absorbing Device	USA	15/477,166	2017.04.03	YAO Lu, GAO Yuan, TANG Tao, LU Jian
21. An Energy Absorbing Device	USA	15/490,977	2017.04.19	LU Jian, GAO Yuan, TANG Tao, YAO Lu,
22. System and Method for Four-Dimensional Printing of Ceramic Origami Structures	USA	15/663,961	2017.07.31	LIU Guo, LU Jian
23. 一種用于汽車的結構 / A Structure for Use in Vehicles	China	2017106763 80.4	2017.08.09	YI Shenghui,

Title of Invention	Country	Application Number	Filed Year	Inventors
				HE Xiaoqiao, LU Jian
24. 一種吸能盒及吸能盒的制造方法	China	2017107854 54.8	2017.09.04	LU Jian, GAO Yuan, YAO Lu, TANG Tao
25. 浸沒式系統 / Submerged System	China	2017108233 15.X	2017.09.13	YI Shenghui, HE Xiaoqiao, LU Jian
26. Surface Mechanical Attrition Treatment (SMAT) Methods and Systems for Modifying Nanostructures	USA	15/723,822	2017.10.03	LI Yangyang, LU Jian, LEE Christopher Michael
27. 金屬結構及其制造方法	China	2017110922 30.5	2017.11.08	WU Ge, LU Jian
28. 金屬材料以及用于制造金屬材料的方法	China	2017111068 92.3	2017.11.10	LU Jian, Wu Ge
29. 一种材料的处理方法	China	2018104407 89.0	2018.05.10	LU Jian, WU Suzhou
30. Method for Constructing a Printed Ceramic Object and a Ceramic Object Constructed by the Same	USA	15/996,832	2018.06.04	LIU Guo, LU Jian
31. A System and Method for Four-Dimensional Printing of Elastomer-Derived Ceramic Structures by Self-Forming Method	USA	16/006,924	2018.06.13	LU Jian, LIU Guo, ZHAO Yan,
32. Systems and Method for Four-Dimensional Printing of Elastomer-Derived Ceramic Structures by Compressive Buckling-Induced Method	USA	16/008,279	2018.06.14	ZHAO Yan, LIU Guo, LU Jian
33. Au-based materials with controlled topological nanostructures via convenient electrochemical techniques for improved device performance / 新穎簡便電化學法賦予金綫微孔納米結構來大幅改進其性能	USA	16/022,770	2018.06.29	ZHAN Yawen, LU Jian, LI Yangyang
34. 貴金屬基材的 3 維納米蝕刻方法	China	2018106964 02.8	2018.06.29	ZHAN Yawen,

Title of Invention	Country	Application Number	Filed Year	Inventors
				LU Jian, LI Yangyang

Selected Recent Publications

1. Tong W.P., Tao N.R., Wang Z.B., **Lu J.**, Lu K. Nitriding iron at lower temperatures, **Science**, Jan. 2003, p. 686-688.
2. Zhang H.W., Hei Z.K., Liu G., **Lu J.**, Lu K. Formation of nanostructured surface layer on AISI 304 stainless steel by means of surface mechanical attrition treatment, **Acta Materialia**, 51, April 2003, p. 1871-1881.
3. Wang Z.B., Tao N.R., Tong W.P., **Lu J.**, Lu K. Diffusion of chromium in nanocrystalline iron produced by means of surface mechanical attrition treatment, **Acta Materialia**, Vol. 51, August 2003, p. 4319-4329.
4. Cao Y.P., **Lu J.** Depth-sensing instrumented indentation with dual sharp indenters: stability analysis and corresponding regularization schemes, **Acta Materialia**, Vol.52, p 1143-1153, March 2004.
5. Cao Y.P., **Lu J.**, A new method to extract the plastic properties of metal materials from an instrumented spherical indentation loading curve, **Acta Materialia**, 52 (13): 4023-4032 AUG 2 2004.
6. Huang L.Y., **Lu J.**, Xu K.W., "Elasto-plastic deformation and fracture mechanism of a diamond-like carbon film deposited on a Ti-6Al-4V substrate in nano-scratch test", **Thin solid film**, 466 (1-2): 175-182 NOV 1 2004.
7. Cao Y.P., **Lu J.**, Size-dependent sharp indentation-I: A closed-form expression of the indentation loading curve, **Journal of the Mechanics and Physics of Solids**, Jan. 2005, vol. 53, pp33-48.
8. Cao Y.P., **Lu J.**, Size-dependent sharp indentation-II: A reverse algorithm to identify plastic properties of metallic materials, **Journal of the Mechanics and Physics of Solids**, Jan. 2005, vol 53, pp49-62.
9. Wu X., Tao N., Hong Y., Liu, G., Xu B., **Lu J.**, Lu K., Strain-induced grain refinement of cobalt during surface mechanical attrition treatment, **Acta Materialia**, 53 (3): 681-691 Feb. 2005.
10. T.Roland, D.Restraint, K.Lu, **J.Lu**, Fatigue life improvement through surface nanostructuring of stainless steel by means of surface mechanical attrition treatment, **Scripta Materialia**, Volume 54, Issue 11, June 2006, Pages 1949-1954.
11. K.Wang, N.R.Tao, G.Liu, **J.Lu**, K.Lu, Plastic strain-induced grain refinement at the nanometer scale in copper, **Acta Materialia**, 54, Issue 19, 5281-5291, Nov. 2006.
12. Y.M.Lin, **J.Lu**, L.P.Wang, T.Xu, Q.J.Xue, Surface nanocrystallization by surface mechanical attrition treatment and its effect on structure and properties of plasma nitrided AISI 321 stainless steel, **Acta Materialia**, Volume 54, Issue 20, December 2006, pp5599-5605.

13. Y.P.Cao, M.Dao, **J.Lu**, A precise correcting method for the study of the superhard material using nanoindentation tests, **Journal of Materials Research** - Vol. 22, No. 5, May, 2007, 1255-1265.
14. X.L.Wu, N.R. Tao, Q.M. Wei, P. Jiang, **J.Lu**, K. Lu , Microstructural evolution and formation of nanocrystalline intermetallic compound during surface mechanical attrition treatment of cobalt, **Acta Materialia**, Volume 55, Issue 17, October 2007.
15. A.Y.Chen, D.F.Li, J.B.Zhang, H.W.Song, **J.Lu**, Make nanostructured metal exceptionally tough by introducing non-localized fracture behaviors, **Scripta Materialia**, Volume 59, Issue 6, September 2008, Pages 579-582.
16. Y.Yang, J.C.Ye, **J.Lu**, F.X.Liu, P.K.Liaw, Effects of specimen geometry and base material on the mechanical behavior of focused-ion-beam-fabricated metallic-glass micropillars, **Acta Materialia**, Volume 57, Issue 5, March 2009, Pages 1613-1623.
17. Fan JT, Chen AY, Fu MW, **J.Lu**, A novel structural gradient metallic glass composite with enhanced mechanical properties, **Scripta Materialia**: Volume 61, Issue 6, Sept 2009, Pages 608-611.
18. Y.H.Li, M.W.Yang, D.N.Wang, **J.Lu**, T.Sun, K.T.V.Grattan, Fiber Bragg gratings with enhanced thermal stability by residual stress relaxation, **Optics Express**, 26 October 2009, Vol. 17, No. 22, pp 19785-19790.
19. J.C.Ye, **J.Lu**, Y.Yang, P.K.Liaw, Study of the intrinsic ductile to brittle transition mechanism of the metallic glasses, **Acta Materialia**, 57(20): 6037-6046, Dec 2009.
20. H.H.Ruan, A.Y.Chen, **J.Lu**, Characterization of Plastically Graded Nanostructured Material: Part I the Theories and the Inverse Algorithm of Nanoindentation, **Mechanics of Materials**, Volume 42, Issue 5, May 2010, Pages 559-569.
21. D.F.Li, C.F.Li, H.Qing, **J.Lu**, The elastic T-stress for slightly curved or kinked cracks **International Journal of Solids and Structure**, Vol. 47, Issue 14, July 2010 pp1753-1763.
22. H.H.Ruan, A.Y.Chen, H.L.Chan, **J.Lu**, Characterization of Plastically Graded Nanostructured Material: Part II the Experimental Validation in Surface Nanostructured Material, **Mechanics of Materials**, Volume 42, Issue 7, July 2010, Pages 698-708.
23. J.C.Ye, **J.Lu**, C.T.Liu, Q.Wang, Y.Yang, Atomistic Free-Volume Zones and Inelastic Deformation of Metallic-Glasses Characterized by High-Frequency Dynamic Micropillar Tests, **Nature Materials**, Volume 9, Issue 8, August 2010, Pages 619-623.
24. H.L.Chan, H.H.Ruan, A.Y.Chen, **J.Lu**, Optimization of strain-rate to achieve exceptional mechanical properties of 304 stainless steel using high speed ultrasonic SMAT, **Acta Materialia**, Volume 58, Issue 15, September 2010, Pages 5086-5096.
25. X.J.Liu, Y.Xu, X.Hui, Z.P.Lu, F.Li, G.L.Chen, **J.Lu**, C.T.Liu, Metallic Liquids and Glasses: Atomic Order and Global Packing, **Physical Review Letters**, Volume 105, Issue 15, 155501, October 2010.
26. H.Li, M.W.Fu, **J.Lu**, H.Yang, Ductile fracture: experiments and computations, **International Journal of Plasticity**, Vol. 27, Issue 2, Feb. 2011, pp147-180.
27. A.Y.Chen, H.H.Ruan, J.Wang, H.L.Chan, Q.Wang, Q. Li, **J.Lu**, The influence of strain rate on the microstructure transition of 304 stainless steel, **Acta Materialia**, Volume 59, Issue 9, May 2011, pages 3697-3709.
28. Q.Wang, C.T.Liu, Y.Yang, Y.D.Dong, **J.Lu**, Atomic-Scale Structural Evolution and Stability of Supercooled Liquid of a Zr-Based Bulk Metallic Glass, **Physical Review Letters**, May 2011, Volume 106, Issue 21, N. 215505.
29. L.L.Zhu, H.H.Ruan, X.Y.Li, M.Dao, H.J.Gao, **J.Lu**, Modeling grain size dependent optimal twin spacing for achieving ultimate high strength and related high ductility in

- nanotwinned metals, **Acta Materialia**, August 2011, Volume 59, Issue 14, pages 5544-5557.
30. H.H.Ruan, L.C.Zhang, **J.Lu**, A new constitutive model for shear banding instability in metallic glass, **International Journal of Solids and Structures**, Oct. 2011, Vol. 48, Issue 21, pages: 3112-3127.
 31. J.Frontan, Y.M.Zhang, M.Dao, **J.Lu**, F.Galvez, A.Jerusalem, Ballistic performance of nanocrystalline and nanotwinned ultrafine crystal steel, **Acta Materialia**, Feb. 2012, Volume 60, Issue 3, pages 1353-1367.
 32. L.L.Zhu, **J.Lu**, Modelling the plastic deformation of nanostructured metals with bimodal grain size distribution, **International Journal of Plasticity**, March 2012, Volumes 30-31, Pages 166-184.
 33. L.L.Zhu, S.Q.Shi, K.Lu, **J.Lu**, A statistical model for predicting the mechanical properties of nanostructured metals with bimodal grain size distribution, **Acta Materialia**, Volume 60, Issue 16, September 2012, Pages 5762-5772.
 34. Y.F.Wu, **J.Lu**, Preventing Debonding at the Steel to Concrete Interface through Strain Localization, **Composites Part B: Engineering**, Volume 45, Issue 1, February 2013, Pages 1061-1070.
 35. Q.Wang, C.T.Liu, Y.Yang, J.B.Liu, Y.D.Dong, **J.Lu**, The atomic-scale mechanism for the enhanced glass-forming-ability of a Cu-Zr based bulk metallic glass with minor element additions, **Scientific Reports**, Vol.4, Article number: 4648; APR 11 2014.
 36. Q.Wang, Y.Yang, H.Jiang, C.T.Liu, H.H.Ruan, **J.Lu**, Superior Tensile Ductility in bulk metallic glass with gradient amorphous structure, **Scientific Reports**, Vol.4, Article Number: 4757; April 2014
 37. *H.N.Kou, **J.Lu**, Y.Li, High-Strength and High-Ductility Nanostructured and Amorphous Metallic Materials, **Advanced Materials**, August 2014, 26, p5518–5524*
 38. L.L.Zhu, S.Q.Qu, X.Guo, **J.Lu**, Analysis of the twin spacing and grain size effects on mechanical properties in hierarchically nanotwinned face-centered cubic metals based on a mechanism-based plasticity model, **Journal of the mechanics and physics of solids**, Volume:76, Pages:162-179, MAR 2015
 39. Q.Wang, S.T.Zhang, Y.Yang, Y.D.Dong, C.T.Liu, **J.Lu**, Unusual fast secondary relaxation in metallic glass, **Nature Communications**, 24 July 2015, doi:10.1038/ncomms8876
 40. Y.F.Ye, Q.Wang, **J.Lu**, C.T.Liu, Y.Yang, High-entropy alloy: challenges and prospects, **Materials Today**, Volume: 19, Issue: 6, Pages: 349-362, July-August, 2016
 41. Y.W.Zhan, S.S.Zeng, H.D.Bian, Z.Li, Z.T.Xu, **J.Lu**, Y.Y.Li, Bestow metal foams with nanostructured surfaces via a convenient electrochemical method for improved device performance, **Nano Research**, Volume: 9, Issue: 8, Pages: 2364-2371, AUG 2016
 42. Zhang, L.C.Chan, T.Gao, Q.Wang, S.Zeng, H.Bian, C.Lee, Z.T.Xu, Y.Y.Li, **J.Lu**, Bulk monolithic electrodes enabled by surface mechanical attrition treatment-facilitated dealloying, **Journal of Materials Chemistry A**, Vol. 4, Issue: 39, Pages: 15057-15063, Oct. 2016
 43. L.L.Zhu, H.H.Ruan, A.Y.Chen, X.Guo, **J.Lu**, Microstructures-based constitutive analysis for mechanical properties of gradient-nanostructured 304 stainless steels, **Acta Materialia**, Vol. 128 , April 2017, pages 375-390
 44. G.Wu, K.C.Chan, L.L.Zhu, L.G.Sun, **J.Lu**, Dual-phase nanostructuring as a route to high strength magnesium alloys, **Nature**, 4 May 2017, pp 80-83. This paper was selected as a cover story of the issue.

45. Q.Wang, J.J.Liu, Y.F.Ye, T.T.Liu, S.Wang, C.T.Liu, **J.Lu**, Y.Yang, Universal secondary relaxation and unusual brittle-to-ductile transition in metallic glasses, **Materials Today**, Vol.: 20, Issue: 6, Jul.-Aug. 2017, Pages: 293-300
46. L.G.Sun · X.Q.He, **J.Lu**, Nanotwinned and hierarchical nanotwinned metals: a review of experimental, computational and theoretical efforts, **NPJ, Computational Materials**, Vol.4 Article Number: UNSP 6, DOI: 10.1038/s41524-018-0062-2, 5 Feb. 2018
47. A.Banerjee, D.Bernoulli, H.T.Zhang, M.F.Yuen, J.B.Liu, J.C.Dong, F.Ding, **J.Lu**, M.Dao, WJ.Zhang, Y.Lu, S.Suresh, Ultralarge elastic deformation of nanoscale diamond, **Science**, 20 Apr. 2018, Vol. 360, Issue 6386, pp. 300-302
48. X.W.Liu, L.G.Sun, L.L.Zhu, J.B.Liu, K.Lu, **J.Lu**, High-order hierarchical nanotwins with superior strength and ductility, **Acta Materialia**, 1 May 2018, pages 397-406
49. G.Liu, Y.Zhao, G.Wu, **J.Lu**, Origami and 4D printing of elastomer-derived ceramic structures, **Science Advances**, 17 August 2018; 4: eaat0641, pp1-10