Professional experience

2017- : Group leader Biomechanics and Mechanobiology, Department of Biological and Chemical Engineering, Aarhus University

2011-2016: Head of Mechanical Engineering, Department of Engineering, Aarhus University

2005-2010: Post. Doc. and Senior Scientist, Interdisciplinary Nanoscience Center (iNANO), Aarhus University

2003-2005: Assistant Professor, Institute of Mechanical Engineering, Aalborg University

2000: Affiliated Manchester Materials Science Center, University of Manchester, United Kingdom

Academic degrees

2003: Ph.D, Institute of Mechanical Engineering, Aalborg University, Denmark

1998: M.Sc., Mechanical Engineering, Institute of of Mechanical Engineering, Aalborg University, Denmark

Commercialization

2011 – 2016:
Scientific advisor LevOss ApS a biotech. startup from iNANO and Aarhus University Hospital devoted to the development of biomaterials for tissue regeneration by accessing stem cells through the integration of chemical and mechanical signals into nanoporous and composite biomaterials.

2009 – 2013:
Scientific advisor CABRA A/S a biotech. startup from iNANO and Aarhus University Hospital devoted to Stroke Risk Assessment based on finite element models from reduced 3D images acquired by either Magnetic Resonance Imaging (MRI) or Computed Tomography (CT).

Teaching

Contribute to the M.Sc. programs in Mechanical Engineering, Biomedical Engineering, and Biotechnology and Chemical Engineering. Teach graduate and post graduate courses on Computational analysis of Chemical and Biological Processes, Systems Biochemistry, Computational Fluid and Solid Mechanics using Finite Element Methods, Biomechanics, Tissue Engineering, Image Processing and Geometric Modelling.

Publications

1. **Experimental and numerical study of solid needle insertions into human stomach tissue.** / Friis, Sif Julie; Nygaard, Jens Vinge; Olesen, Camilla Gammelgaard et al.
   In: Journal of the Mechanical Behavior of Biomedical Materials, Vol. 162, 02.2025.
2. **Mechanical memory based biofabrication of hierarchical elastic cardiac tissue.** / Li, Zhitong; Kovács, Panna; Friec, Alice Le et al.
   In: Biofabrication, Vol. 17, No. 1, 04.11.2024.
3. **Amyloid-β aggregates activate peripheral monocytes in mild cognitive impairment.** / Juul-Madsen, Kristian; Parbo, Peter; Ismail, Rola et al.
   In: Nature Communications, Vol. 15, No. 1, 1224, 02.2024.
4. **Investigating the importance of left atrial compliance on fluid dynamics in a novel mock circulatory loop.** / Meskin, Masoud; Starkey, Philip Alexander; Kaspersen, Alexander Emil et al.
   In: Scientific Reports, Vol. 14, No. 1, 1864, 22.01.2024, p. 1864.
5. **Dry electrode integrated with garment.** / Suetta, C (Inventor); Merhi, Youssif (Inventor); Mikkelsen, Peter Høgh (Inventor) et al.
   Patent No.: WO2023209148 (A1). Nov 02, 2023.
6. **Inkjet-printed flexible piezoelectric sensor for self-powered biomedical monitoring.** / Abdolmaleki, Hamed; Haugen, Astri Bjørnetun; Merhi, Youssif et al.
   In: Materials Today Electronics, Vol. 5, 100056, 09.2023.

7. **Feasibility of periodic stabilizers for extending coiled tubing reach.** / Liljenhjerte, Johannes; Vudayagiri, Sindhu; von Solms, Nicolas et al.
In: Geoenergy Science and Engineering, Vol. 227, 211779, 08.2023.

8. **A sustainable and regioselective synthesis of Hemi-bis(monoacylglycero)phosphates and bis(diacylglycero)phosphates.** / Bogojevic, Oliver; Zhang, Yan; Daugaard Wolff, Christian et al.
In: iScience, Vol. 26, No. 7, 107075, 07.2023.

9. **Biomechanical comparison of porcine mitral leaflets with porcine small intestinal submucosa extracellular matrix.** / Islamagič, Lejla; Tjørnild, Marcell Juan; Carlson Hanse, Lisa et al.
In: Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, Vol. 237, No. 4, 04.2023, p. 435 - 442.

10. **Printed dry electrode for neuromuscular electrical stimulation (NMES) for e-textile.** / Merhi, Youssif; Betancur, Pablo F.; Ripolles, Teresa S. et al.
In: Nanoscale, Vol. 15, No. 11, 03.2023, p. 5337-5344.

11. **Biomechanical properties of the stomach: A comprehensive comparative analysis of human and porcine gastric tissue.** / Friis, Sif Julie; Hansen, Torben Strøm; Poulsen, Mette et al.
In: Journal of the Mechanical Behavior of Biomedical Materials, Vol. 138, 105614, 02.2023.

12. **Electrospun nanofiber mesh with connective tissue growth factor and mesenchymal stem cells for pelvic floor repair: Long-term study.** / Laursen, Sofie Husted; Hansen, Signe Gellert; Taskin, Mehmet Berat et al.
In: Journal of Biomedical Materials Research. Part B: Applied Biomaterials, Vol. 111, No. 2, 02.2023, p. 392-401.

13. **Phospholipase D-Catalyzed Transphosphatidylation for the Synthesis of Rare Complex Phospholipid Species—Hemi-bis(monoacylglycero)phosphate and Bis(diacylglycero)phosphate.** / Bogojevic, Oliver; Zhang, Yan; Daugaard Wolff, Christian et al.
In: ACS Sustainable Chemistry & Engineering, Vol. 11, No. 8, 02.2023, p. 3506-3516.

14. **Designer phospholipids – structural retrieval, chemo-/bio- synthesis and isotopic labeling.** / Bogojevic, Oliver; Nygaard, Jens Vinge; Wiking, Lars et al.
In: Biotechnology Advances, Vol. 60, 108025, 11.2022.

15. **Dynamic viscoelastic properties of porcine gastric tissue: Effects of loading frequency, region and direction.** / Friis, Sif Julie; Strøm Hansen, Torben; Poulsen, Mette et al.
In: Journal of Biomechanics, Vol. 143, 111302, 10.2022.

16. **Mechanical investigations of free-standing SiN membranes patterned with one-dimensional photonic crystal structures.** / Darki, Ali Akbar; Nielsen, Robin Vinther; Nygaard, Jens Vinge et al.
In: Journal of Applied Physics, Vol. 131, No. 19, 195101, 05.2022.

17. **Optical spatial differentiation with ultrathin freestanding subwavelength gratings.** / Darki, Ali A.; Dantan, Aurélien; Nygaard, Jens V. et al.
Optics, Photonics and Digital Technologies for Imaging Applications VII. ed. / Peter Schelkens; Tomasz Kozacki. SPIE - International Society for Optical Engineering, 2022. 121380D (Proceedings of SPIE - The International Society for Optical Engineering, Vol. 12138).

18. **Stability of periodically supported slender structures and quantification of helix formation.** / Liljenhjerte, Johannes; Vudayagiri, Sindhu; Solms, Nicolas von et al.
In: Applications in Engineering Science, Vol. 8, 100070, 12.2021.

19. **Examination of Porcine Gastric Biomechanics in the Antrum Region.** / Friis, Sif Julie; Nygaard, Jens Vinge; Poulsen, Mette et al.
In: International Journal of Biomedical and Biological Engineering, Vol. 15, No. 10, 19.10.2021.

20. **Evaluating stabilizing initiatives to extend coiled tubing reach.** / Liljenhjerte, Johannes; Nygaard, Jens Vinge.
In: Journal of Petroleum Science and Engineering, Vol. 205, 108905, 10.2021.

21. **Left atrial appendage occlusion with the Amulet device: to tug or not to tug?** / Salmon, Mandy K.; Hammer, Karen Eich; Nygaard, Jens Vinge et al.
In: Journal of Interventional Cardiac Electrophysiology, Vol. 61, No. 1, 06.2021, p. 199-206.

22. **ColFeatures: Automated data extraction and classification of bacterial colonies.** / Garcia Soriano, Daniela Azucena; Andersen, Frederikke Dybdahl; Nygaard, Jens Vinge et al.
bioRxiv, 2021.

23. **Elektrisk stimulation mod muskel- og funktionstab hos en patient indlagt med COVID-19.** / Frydenlund, Anders; Poggi, Axel I; Hansen, Sofie K. et al.
In: Ugeskrift for Læger, Vol. 183, No. 20, V03210275, 17.05.2021.

24. **Profilometry and stress analysis of suspended nanostructured thin films.** / Darki, Ali Akbar; Parthenopoulos, Alexios; Nygaard, Jens Vinge et al.
In: Journal of Applied Physics, Vol. 129, No. 6, 065302, 02.2021.

25. **Elektrisk stimulation mod muskel- og funktionstab hos en patient indlagt med COVID-19.** / Frydenlund, Anders; Poggi, Axel I.; Hansen, Sofie K. et al.
In: Ugeskrift for Læger, Vol. 183, No. 14, 2021, p. 1-4.

26. **Suspended subwavelength gratings for optical processing and optomechanics.** / Darki, Ali A.; Parthenopoulos, Alexios; Jeppesen, Bjarke R. et al.
High Contrast Metastructures X. ed. / Connie J. Chang-Hasnain; Jonathan A. Fan; Weimin Zhou. SPIE - International Society for Optical Engineering, 2021. 116951N (Proceedings of SPIE - The International Society for Optical Engineering, Vol. 11695).

27. **Profilometry and stress analysis of suspended nanostructured thin films.** / Darki, Ali Akbar; Parthenopoulos, Alexios; Nygaard, Jens Vinge et al.
In: J. Appl. Phys., Vol. 129, No. 6, 065302, 13.11.2020.

28. **The importance of collagen composition and biomechanics for the porcine aortic root.** / Salvig, Camilla D.; Benhassen, Leila L.; Nygaard, Jens V. et al.
In: Journal of Biomechanics, Vol. 111, 110009, 10.2020.

29. **Correction to: Left atrial appendage occlusion with the Amulet device: to tug or not to tug?** / Salmon, Mandy K; Hammer, Karen Eich; Nygaard, Jens Vinge et al.
In: Journal of Interventional Cardiac Electrophysiology, 07.2020.

30. **Electrospun nanofiber mesh with fibroblast growth factor and stem cells for pelvic floor repair.** / Hansen, Signe Gellert; Taskin, Mehmet Berat; Chen, Menglin et al.
In: Journal of Biomedical Materials Research - Part B Applied Biomaterials, Vol. 108, No. 1, 01.2020, p. 48-55.

31. **Mechanical performance of electronically functional smart textiles.** / Merhi, Youssif; Mikkelsen, Peter H.; Suetta, Charlotte et al.
Transactions on additive manufacturing meets medicine. ed. / Thorsten M. Buzug; Hermann Seitz. Infinite Science, 2020. (Trans. AMM 2019; No. Supplement 1(1S), Vol. 1(1)).

32. **Novel examination method for aortic tissue.** / Friis, Sif Julie; Hviid, Laura Boline; Noor, Mariam Abdi et al.
2019. Poster session presented at 37th Annual Meeting. Danish Society for Biomedical Engineering., København, Denmark.

33. **Characterization of The Regional Loss and Storage Moduli in Different Segments of The Thoracic Aorta.** / Noor, Mariam Abdi; Nygaard, Jens Vinge; Hasenkam, J. Michael et al.
2019. Abstract from 37th Annual Meeting. Danish Society for Biomedical Engineering., København, Denmark.

34. **Biomechanical characterization of the regional loss and storage moduli of the thoracic aorta.** / Noor, Mariam Abdi; Nygaard, Jens Vinge; Hasenkam, J. Michael et al.
2019. Abstract from 29th Annual Meeting SSRCTS, Geilo, Norway.

35. **Biomechanical properties of porcine small intestinal submucosa matrix compared with porcine mitral valve leaflets.** / Islamagic, Lejla; Tjørnild, Marcell Juan; Carlson Hanse, Lisa et al.
2019. Poster session presented at 29th Annual Meeting SSRCTS, Geilo, Norway.

36. **The effect of residual stress relaxation on the microstructure of ductile cast iron, using vibratory and thermal stress-relieving techniques.** / Alizadeh Zolbin, Maryam; Nygaard, Jens Vinge; Sigaard Christensen, P, et al.
2019. Poster session presented at EBSD Meeting 2019, London, United Kingdom.

37. **Compression garment for providing neuromuscular electrical stimulation.** / Suetta, C (Inventor); Frandsen, U (Inventor); Nygaard, Jens Vinge (Inventor) et al.
Patent No.: WO2018/206067 A1. Nov 15, 2018.

38. **Frequency Dependant Viscoelastic Properties of different Regions of Aorta.** / Noor, Mariam Abdi; Nygaard, Jens Vinge; Johansen, Peter et al.
2018. Poster session presented at 36th Annual Meeting. Danish Society for Biomedical Engineering, Vingsted, Denmark.

39. **Biomechanical in vitro assessment of the porcine aortic root.** / Salvig, Camilla Dalby; Benhassen, Leila Louise; Nygaard, Jens Vinge et al.
2018. Poster session presented at 28th Annual Meeting, Scandinavian Society for Research in Cardiothoracic Surgery, Geilo, Norway.

40. **Electrospun biodegradable microfibers induce new collagen formation in a rat abdominal wall defect model: A possible treatment for pelvic floor repair?** / Tarpø, Cecilie Lærke Glindtvad; Chen, Menglin; Nygaard, Jens Vinge et al.
In: Journal of Biomedical Materials Research. Part B: Applied Biomaterials, Vol. 106, No. 2, 2018, p. 680-688.

41. **Effects of Dilution Systems in Olfactometry on the Recovery of Typical Livestock Odorants Determined by PTR-MS.** / Kasper, Pernille; Mannebeck, Dietmar; Oxbøl, Arne et al.
In: Sensors, Vol. 17, No. 8, 1859, 11.08.2017.

42. **Computational Medicine: The Health Technology Program at Aarhus University applies computational biology to investigate the heterogeneity of tumours.** / Nygaard, Jens Vinge.
In: Pan European Networks: Science & Technology, No. 22, 18.04.2017, p. 171.

43. **A project on innovation pipeline concepts.** / Nygaard, Jens Vinge; Skov, Anne Ladegaard; Gross-Petersen, Jørgen.
2017. Abstract from Danish Hydrocarbon Research and Technology Centre Technology Conference 2017, Kolding, Denmark.

44. **Innovative Pipeline Concepts for North Sea Applications.** / Gross-Petersen, Jørgen; Nygaard, Jens Vinge; Skov, Anne Ladegaard.
2017. Poster session presented at Danish Hydrocarbon Research and Technology Centre Technology Conference 2017, Kolding, Denmark.

45. **Aarhus Regenerative Orthopaedics Symposium (AROS): Regeneration in the ageing population.** / Foldager, Casper B.; Bendtsen, Michael; Berg, Lise C. et al.
In: Acta Orthopaedica. Supplementum , Vol. 87, No. eSuppl 363, 16.12.2016, p. 1-5.

46. **Simulation of heterogeneous molecular delivery in tumours using μCT reconstructions and MRI validation.** / Wittenborn, Thomas Rea; Nielsen, Thomas; Thomsen, Jesper Skovhus et al.
In: Microvascular Research, Vol. 108, 26.08.2016, p. 69-74.

47. **Intestinal organoids initiated in microfluidics-based double emulsions.** / Ma, Xiao; Jepsen, Morten L.; Ivarsen, Anne Kathrine et al.
20th International Conference on Miniaturized Systems for Chemistry and Life Sciences: MicroTAS 2016. Chemical and Biological Microsystems Society, 2016. p. 513-514.

48. **Three-dimensional polydopamine functionalized coiled microfibrous scaffolds enhance human mesenchymal stem cells colonization and mild myofibroblastic differentiation.** / Taskin, Mehmet Berat; Xu, Ruodan; Gregersen, Hans Vejersøe et al.
In: A C S Applied Materials and Interfaces, Vol. 8, No. 25, 2016, p. 15864–15873.

49. **Injectable Hierarchical Scaffolds.** / Nygaard, Jens Vinge (Inventor); Perti, Christian (Inventor).
Patent No.: PCT/DK2014/050422. Jun 18, 2015.

50. **Bioreactor for quantification of cell metabolism by MR-hyperpolarization.** / Lauritsen, Simon Holm; Bertelsen, Lotte Bonde; Daugård, Preben et al.
In: Biomedical Physics & Engineering Express, Vol. 1, No. 4, 2015.

51. **Optimizing Plasmonically Enhanced Upconversion.** / Madsen, Søren Peder; Johannsen, Sabrina Rostgaard; Jeppesen, Bjarke Rolighed et al.
2015. Poster session presented at SiliconPV 2015, Konstanz , Germany.

52. **Optimizing Plasmonically Enhanced Upconversion.** / Madsen, Søren Peder; Johannsen, Sabrina Rostgaard; Jeppesen, Bjarke Rolighed et al.
In: Energy Procedia, Vol. 77, 2015, p. 478-486.

53. **The effect of TAVI oversizing on valve tissue stresses.** / Krishna, Kumaran; Galsgaard, R.; Heide-Jørgensen, Simon et al.
2015. Poster session presented at The 25th Annual Meeting of the Scandinavian Society for Research in Cardiothoracic Surgery, Geilo, Norway.

54. **Ultraporous nanofeatured PCL–PEO microfibrous scaffolds enhance cell infiltration, colonization and myofibroblastic differentiation.** / Li, Yanfang; Gregersen, Hans Vejersøe; Nygaard, Jens Vinge et al.
In: Nanoscale, Vol. 7, No. 36, 2015, p. 14989-14995.

55. **Up-conversion enhancement in Er3+ doped TiO2 through plasmonic coupling: Experiments and finite-element modeling.** / Johannsen, Sabrina Rostgaard; Madsen, Søren Peder; Jeppesen, Bjarke Rolighed et al.
In: Applied Physics Letters, Vol. 106, 2015.

56. **In vitro dynamic nuclear polarization study for tracking real-time metabolism in endothelial progenitor cells.** / Lauritsen, Simon Meyer; Bertelsen, Lotte Bonde; Johansen, Peter et al.
2014. Abstract from DMTS 2014, dansk medikoteknisk landsmøde, Brædstrup, Denmark.

57. **Surface-modified functionalized polycaprolactone scaffolds for bone repair: In vitro and in vivo experiments.** / Jensen, Jonas; Rölfing, Jan Hendrik Duedal; Svend Le, Dang Quang et al.
In: Journal of Biomedical Materials Research. Part A, Vol. 102, No. 9, 09.2014, p. 2993-3003.

58. **Numerical simulation of LDL transport through the carotid arterial wall.** / Hansen, C; Bay, D; Jensen, M R et al.
In: Computer Methods in Biomechanics and Biomedical Engineering, Vol. 17 , No. sup1, 08.2014, p. 20-21.

59. **Accumulation of nano-sized particles in a murine model of angiogenesis.** / Wittenborn, Thomas R; Larsen, Esben K U; Nielsen, Thomas et al.
In: Biochemical and Biophysical Research Communications, Vol. 443, No. 2, 10.01.2014, p. 470-6.

60. **Spatially Controlled Delivery of siRNAs to Stem Cells in Implants Generated by Multi-Component Additive Manufacturing.** / Andersen, Morten Østergaard; Le, Dang Quang Svend; Chen, Muwan et al.
In: Advanced Functional Materials, Vol. 23, No. 45, 05.12.2013, p. 5599-5607.

61. **Combining imaging modalities in the modeling of multiparameter devices.** / Nygaard, Jens Vinge.
In: Journal of Medical Devices, Transactions of the ASME, Vol. 7, No. 4, 01.01.2013.

62. **Combining Imaging Modalities in the Modelling of Multi Parameter Devices.** / Nygaard, Jens Vinge.
ASME 2013 Conference on Frontiers in Medical Devices: Applications of Computer Modeling and Simulation (FMD2013). Vol. 2013 American Society of Mechanical Engineers, 2013. FMD2013-16124.

63. **A novel nano-structured porous polycaprolactone scaffold improves hyaline cartilage repair in a rabbit model compared to a collagen type I/III scaffold: in vitro and in vivo studies.** / Christensen, Bjørn Borsøe; Foldager, Casper Bindzus; Hansen, Ole Møller et al.
In: Knee Surgery, Sports Traumatology, Arthroscopy, Vol. 20, No. 6, 06.2012, p. 1192-204.

64. **Computational Fluid Dynamics simulation of a-v fistulas: From MRI and ultrasound scans to numeric evaluation of hemodynamics.** / Niemann, Anders Koustrup; Thrysoe, Samuel; Nygaard, Jens Vinge et al.
In: Journal of Vascular Access, Vol. 13, No. 1, 2012, p. 36-44.

65. **Fabrication and characterization of a rapid prototyped tissue engineering scaffold with embedded multicomponent matrix for controlled drug release.** / Chen, Muwan; Le, Dang Q S; Hein, San et al.
In: International Journal of Nanomedicine (Online), No. 7, 2012, p. 4285-97.

66. **The Effect of Carotid Plaque Morphology on Longitudinal Fibrous Cap Stress Levels.** / Thrysøe, Samuel Alberg; Mikkelsen, Anders Frodo Stegmann; Eldrup, Nikolaj et al.
In: World Journal of Mechanics, Vol. 2, 2012, p. 216-223.

67. **Ultra-High-Field DCE-MRI of Angiogenesis in a Novel Angiogenesis Mouse Model.** / Wittenborn, Thomas; Nielsen, Thomas; Nygaard, Jens Vinge et al.
In: Journal of Magnetic Resonance Imaging, Vol. 35, No. 3, 2012, p. 703-710.

68. **TISSUE SCAFFOLD WITH CONTROLLED DRUG RELEASE.** / Chen, Muwan (Inventor); Hein, San (Inventor); Le, Dang Quang Svend (Inventor) et al.
Patent No.: PCT/DK2011/050381. Oct 07, 2011.

69. **IMPLANT FOR TREATMENT OF SKELETAL DEFORMITIES.** / Le, Dang Quang Svend (Inventor); Wang, Yu (Inventor); Foss, Morten (Inventor) et al.
Patent No.: WO/2011/116773. Sept 29, 2011.

70. **Hypoxia Enhances Chondrogenic Differentiation of Human Cord Blood Multilineage Progenitor Cells Seeded on a Novel Scaffold of Freeze Dried Polycaprolactone.** / Munir, Samir; Figueroa, Ryan Jude; Koch, Thomas Gadegaard et al.
2011. Abstract from DOS årsmøde, København, Denmark.

71. **Plasmon hybridization in silver nanoislands as semishell arrays coupled to a thin metallic film.** / Maaroof, Abbas; Nygaard, Jens Vinge; Sutherland, Duncan S.
In: Plasmonics, Vol. 6, No. 2, 06.2011, p. 419-425.

72. **3D deformation in nanoporous system for tissue phenotype emergence through stem cell specification.** / Nygaard, Jens Vinge; Foss, Morten; Cloetens, Peter et al.
2011.

73. **Active Pumping in Endothelial Cell Tight Junctions.** / Thrysøe, Samuel Alberg; Nygaard, Jens Vinge.
2011. Poster session presented at Biomechanics in vascular Biology and Cardiovascular Disease, Rotterdam, Netherlands.

74. **In-vivo Cellularization of PCL Scaffolds in Juvenile Pig Aorta: A Step Towards Creating PCL Vascular Prostheses.** / Mortensen, Martin Bødtker; Hønge, Jesper Langhoff; Le, Dang Quang Svend et al.
2011. Poster session presented at PhD Day 2011, Aarhus University, Faculty of Health Sciences, Aarhus, Denmark.

75. **Characterisation of internal morphologies in electrospun fibers by X-ray tomographic microscopy.** / Nygaard, Jens Vinge; Uyar, Tamer; Chen, Menglin et al.
In: Nanoscale, Vol. 3, 2011.

76. **Hypoxic chondrogenic differentiation of human cord blood stem cells in structurally-graded polycaprolactone scaffolds.** / Munir, Samir; Le, Dang Quang Svend; Figueroa, Ryan Jude et al.
2011. Poster session presented at PhD Day 2011, Aarhus University, Faculty of Health Sciences, Aarhus, Denmark.

77. **Osteopontin functionalization of hydroxyapatite nanoparticles in a PDLLA matrix promotes bone formation.** / Jensen, Thomas Hartvig Lindkjær; Baas, J; Dolatshahi-Pirouz, Alireza et al.
In: Journal of Biomedical Materials Research. Part A, Vol. 99, No. 1, 2011, p. 94-101.

78. **Plaque geometry: determinant for fibrous cap stress levels.** / Thrysøe, Samuel Alberg; Nygaard, Jens Vinge; Niemann, Anders et al.
In: Journal of Cardiovascular Magnetic Resonance, Vol. 13 (suppl 1), 2011, p. 376.

79. **Selective isolation and differentiation of a stromal population of human embryonic stem cells with osteogenic potential.** / Harkness, Linda; Mahmood, Amer; Ditzel, N et al.
In: The Bone, Vol. 48, No. 2, 2011, p. 231-241.

80. **Self-assembled composite matrix in a hierarchical 3-D scaffold for bone tissue engineering.** / Chen, Muwan; Le, Dang Quang Svend; Baatrup, Anette et al.
In: Acta Biomaterialia, Vol. 7, No. 5, 2011, p. 2244-55.

81. **SUBMERGED PERFUSION BIOREACTOR: Biological device for, e.g. cell culturing, has body delimited by rim comprising recessed portion that is cavity in rim of body, and wall delimiting recessed portion comprising outlet orifice allowing liquid medium to flow out of body.** / Le, Dang Quang Svend (Inventor); Foss, Morten (Inventor); Nygaard, Jens Vinge (Inventor) et al.
Patent No.: WO/2010/139337. Dec 09, 2010.

82. **Hydroxyapatite nanoparticles in poly-D,L-lactic acid coatings on porous titanium implants conducts bone formation.** / Jensen, T; Jakobsen, T; Baas, J et al.
In: Journal of Biomedical Materials Research. Part A, Vol. 95, No. 3, 01.12.2010, p. 665-672.

83. **A novel angiogenesis mouse model for screening functionalized nano-particles.** / Wittenborn, Thomas; Nygaard, Jens Vinge; Larsen, E. K. U. et al.
2010. Abstract from Ph.d-dag , Aarhus, Denmark.

84. **Can sites prone to flow induced vascular complications in a-v fistulas be assessed using computational fluid dynamics?** / Niemann, A K; Udesen, J; Thrysøe, Samuel Alberg et al.
In: Journal of Biomechanics, Vol. 43, No. 10, 2010, p. 2002-9.

85. **Cartilage constructs from human cord blood stem cells seeded in structurally-graded polycaprolactone scaffolds.** / Munir, Samir; Koch, Thomas Gadegaard; Foldager, Casper Bindzus et al.
2010. Poster session presented at Nordic Orthopaedic Federation Congress.

86. **Curvature of Synthetic and Natural Surfaces is an Important Target Feature in Classical Pathway Complement Activation.** / Pedersen, Martin Bjerregård; Zhou, Xingfei; Larsen, Esben Kjaer Unmack et al.
In: Journal of Immunology, Vol. 184, No. 4, 2010, p. 1931-1945.

87. **Hydroxyapatite nanoparticles in poly-D,L-lactic acid coatings on porous titanium implants conducts bone formation.** / Jensen, Thomas Hartvig Lindkjær; Jakobsen, Thomas; Baas, Jørgen et al.
In: Journal of Biomedical Materials Research. Part A, 2010.

88. **Longitudinal distribution of mechanical stresses in carotid plaques of symptomatic patients.** / Thrysøe, Samuel A; Oikawa, Minako; Yuan, Chun et al.
In: Stroke, Vol. 41, No. 5, 2010, p. 1041-3.

89. **Mechano transduction in human stem cells cultured in porous scaffolds.** / Nygaard, Jens Vinge.
2010. Poster session presented at ESB, Edinburgh.

90. **siRNA nanoparticle functionalization of nanostructured scaffolds enables controlled multilineage differentiation of stem cells.** / Andersen, Morten Ø; Nygaard, Jens V; Burns, Jorge S et al.
In: Molecular Therapy, Vol. 18, No. 11, 2010, p. 2018-2027.

91. **Submerged Perfusion Bioreactor (SURFBREAC).** / Le, Dang Quang Svend (Inventor); Nygaard, Jens Vinge (Inventor); Foss, Morten (Inventor) et al.
Patent No.: PCT/DK2010/050125.

92. **Differences in early osteogenesis and bone micro-architecture in anterior lumbar interbody fusion with rhBMP-2, equine bone protein extract, and autograft.** / Foldager, Casper; Bendtsen, Michael; Nygaard, Jens Vinge et al.
In: Bone, Vol. 45, No. 2, 01.08.2009, p. 267-73.

93. **A Novel in Vivo Angiogenesis Mouse Model.** / Wittenborn, Thomas; Nygaard, Jens Vinge; Horsman, Michael Robert et al.
In: Arteriosclerosis, Thrombosis, and Vascular Biology, No. 7, 2009.

94. **Development and evaluation of a tissue-engineered trilaminar scaffold for heart valve replacement, Martin Mortensen.** / Mortensen, Martin Mørck; Nygaard, Jens Vinge; Hønge, Jesper Langhoff et al.
2009. Poster session presented at iNANO 7th annual meeting, Aarhus, Denmark.

95. **Differences in Early Osteogenesis and Bone Micro-architecture in Anterior Lumbar Interbody Fusion with rhBMP-2, Equine Bone Protein Extract, and Autograft.** / Foldager, Casper; Bendtsen, Michael; Nygaard, Jens Vinge et al.
In: Bone, Vol. 45, 2009, p. 267-273.

96. **Kroppen skal bygge nye knogler.** / Bjerre, Lea; Nygaard, Jens Vinge.
In: Politiken Weekly, 2009, p. 1.

97. **Method for calculating pressures in a fluid stream through a tube section, especially a blood vessel with atherosclerotic plaque.** / Nygaard, Jens Vinge (Inventor); Samuel, Samuel Alberg (Inventor); Kim, Won Yong (Inventor) et al.
Patent No.: PCT/Dk2008/050266.

98. **Polycaprolactone nanomesh cultured with hMSC evaluated by synchrotron tomography.** / Nygaard, Jens Vinge; Andersen, Morten Østergaard; Cloetens, Peter et al.
2009. Poster session presented at Self-assembly: from nature to clinics, Porto, Portugal.

99. **Structurally Graded Scaffolds.** / Nygaard, Jens Vinge (Inventor); Bjerre, Lea (Inventor); Bünger, Cody (Inventor) et al.

100. **Three-dimentional Nanostructured Hybrid Scaffold and Manufacture Thereof.** / Bünger, Cody (Inventor); Besenbacher, Flemming (Inventor); Bjerre, Lea (Inventor) et al.

101. **Investigation of particle-functionalized tissue engineering scaffolds using X-ray tomographic microscopy.** / Nygaard, J V; Andersen, M Ø; Howard, K A et al.
In: Biotechnology and Bioengineering (Print), Vol. 100, No. 4, 01.07.2008, p. 820-9.

102. **Assessment of Hemodynamic Conditions in A-V Shunts using CFD.** / Niemann, Anders; Samuel, Samuel Alberg; Fründ, Ernst-Torben Wilhelm et al.
2008. Poster session presented at PhD Day, University of Aarhus, Århus, Denmark.

103. **Carotid Plaque Stresses.** / Samuel, Samuel Alberg; Nygaard, Jens Vinge.
Modelling and Simulation. ed. / Giuseppe Petrone; Giuliano Cammarata. 1. ed. ed. Vienna, Austria: I-Tech Education and Publishing, 2008. p. 167-184.

104. **Computer Aided Biological Response Assessment, CABRA applied to Atherosclerosis.** / Nygaard, Jens Vinge; Samuel, Samuel Alberg; Kim, Won Yong et al.
2008. Poster session presented at iNANO 6th annual meeting, Aarhus, Denmark.

105. **Mechanical stresses in carotid plaques using MRI-based fluid-structure interaction models.** / Kock, Samuel A; Nygaard, Jens V; Eldrup, Nikolaj et al.
In: Journal of Biomechanics, Vol. 41, No. 8, 2008, p. 1651-1658.

106. **Nanomesh evolved in polycaprolactone shown by synchrotron holo-tomography.** / Nygaard, Jens Vinge; Foss, Morten; Cloetens, Peter et al.
2008. Poster session presented at 8th World Biomaterials Congress, Amsterdam, Belgium.

107. **Nanoscaffolds for Drug Delivery and Tissue Engineering.** / Nygaard, Jens Vinge; Andersen, Morten Østergaard; Cloetens, Peter et al.
2008. Poster session presented at iNANO 6th annual meeting, Aarhus, Denmark.

108. **The Effect of Lipid Core Placement on Fibrous Cap Stress Levels.** / Samuel, Samuel Alberg; Nygaard, Jens Vinge; Niemann, Anders et al.
2008. Poster session presented at 18th Annual Meeting of the Scandinavian Society for Research in Cardiothoracic Surgery, Geilo, Norway.

109. **The Effect of Lipid Core Placement on Fibrous Cap Stress Levels.** / Samuel, Samuel Alberg; Nygaard, Jens Vinge; Niemann, Anders et al.
2008. Poster session presented at ISMRM, Toronto, Canada.

110. **Sandwich beam with a periodical and graded core manufactured using rapid prototyping.** / Nygaard, Jens Vinge; Lyckegaard, Anders.
In: Journal of Sandwich Structures and Materials, Vol. 9, No. 4, 01.07.2007, p. 365-376.

111. **Patient risk assessment using computational methods in medicine.** / Samuel, Samuel Alberg; Nygaard, Jens Vinge.
iNANO Annual Report 2007. University of Aarhus, 2007. p. 32-33.

112. **Sandwich Panel with a periodical and graded core manufactured using rapid prototyping.** / Nygaard, Jens Vinge; Lyckegaard, Anders.
In: Journal of Sandwich Structures & Materials, Vol. 9, No. 4, 2007, p. 365-376.

113. **Surface delivery of siRNA for implants.** / Andersen, Morten Østergaard; Nygaard, Jens Vinge; Howard, Ken et al.
In: European Cells & Materials, Vol. 14, No. 3, 2007, p. 118.

114. **Stresses in Carotid Plaques using MRI-based Fluid Structure Interaction Models.** / Samuel, Samuel Alberg; Fründ, Torben; Kim, Won Yong et al.
Nordic Comsol Conference 2006 Copenhagen. ed. / Lars Gregersen. Vol. 1 1. ed. Comsol A/S, 2006.

115. **Tortuosity Flow Parameter in Scaffolds from Synchrotron Tomography.** / Nygaard, Jens Vinge; Bregnant, Luigi; Mygind, Tina et al.
2006. Poster session presented at Biology and Medicine with Low Energy Synchrotron Radiation, Institute for Storage Ring Facilities (ISA) at Aarhus University, Aarhus, Denmark.

116. **Femlab Analysis of Open Aluminium Foam in Compression.** / Nygaard, Jens Vinge.
Proceedings of the COMSOL Multiphysics User's Conference 2005. 2005.

117. **Making implants last a lifetime.** / Kjems, Jørgen; Bünger, Cody; Nygaard, Jens Vinge et al.
iNANO Annual Report 2005. University of Aarhus, 2005. p. 14-15.

118. **Morphology of a Closed Cell Polyethylene Sandwich Core and its Tape Interphase: STVF rammeprogram I: Structurally Graded Polymeric Materials and Filled Polymers, Task C: Micromechanics and microstructure property correlations.** / Nygaard, Jens Vinge; Pyz, Ryszard.
Aalborg Universitet, 2005.

119. **Analysis of Nanoparticles in Scaffolds for Tissue Engineering by use of X-Ray Nano Tomography.** / Nygaard, Jens Vinge; Andersen, Morten Østergaard; Howard, Ken et al.
2004. Poster session presented at iNANO 4th annual meeting, Aarhus, Denmark.

120. **Characterisation of Microcellular Foams using X-Ray Microtomography and Raman Spectroscopy.** / Nygaard, Jens Vinge; Pyrz, Ryszard.
In: Cellular Polymers, Vol. 22, No. 6, 2003, p. 347-369.

121. **In-situ delamination studies using X-ray microtomography.** / Pyrz, Ryszard; Nygaard, Jens Vinge.
Proceedings of International Conference on Composites in Construction--CCC2003. ed. / D. Bruno. 2003. p. 189.

122. **Mechanical characterisation of microcellular thermoplastic foams manufactured using gas diffusion technique.** / Nygaard, Jens Vinge.
Aalborg: Aalborg Universitetsbibliotek, 2003.

123. **In-situ delamination studies using X-ray microtomography.** / Pyrz, Ryszard; Nygaard, Jens V.
Design Engineering. American Society of Mechanical Engineers (ASME), 2002. p. 625-629.

124. **A reinforced, flexible conduit and a method of manufacturing same.** / Nygaard, Jens Vinge (Inventor); Rytter, Jan (Inventor).