

LIST OF PUBLICATIONS (until 2002)

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1. Institute for Semiconductor Physics/IHP GmbH, Frankfurt(Oder)

1.1. Journal Publications

1. H. Rücker and H. J. Osten:
Suppression of boron diffusion by carbon: A new route to advanced heterobipolar transistors
in *Silicon-Germanium Carbon Alloys: Growth, Properties and Applications*, ed. by S.T. Panelides and S. Zollner, Taylor & Francis Books, Inc., New York 2002, pp. 325
2. H.J. Osten, J.P. Liu, and H.J. Müssig:
Band gap and band discontinuities at crystalline Pr₂O₃/Si(001) heterojunctions
Appl. Phys. Lett. **80** (2002) 297.
3. A. Hattab, J.L. Perrossier, F. Meyer, M. Barthula, H.J. Osten, and J. Griesche:
Schottky barrier inhomogeneities at contacts to carbon-containing silicon/germanium alloys
Mat. Sci. & Techn. B **89** (2002) 284.
4. H.J. Müssig, J. Dabrowski, K. Ignatovich, J.P. Liu, V. Zavodinsky, and H.J. Osten:
Initial stages of praseodymium oxide film formation on Si(001)
Surf. Sci. **504** (2002) 159.
5. B. Tillack and H.J. Osten:
New trends in SiGe technology: Carbon-doped heterojunction bipolar transistors – enhancing the capability of SiGe technology
Chip **6** (2002) 33
6. H.J. Osten, J.P. Liu, E. Bugiel, H.J. Müssig, and P. Zaumseil:
Growth of crystalline praseodymium oxide on silicon
J. Chrystal Growth **235** (2002) 229.
7. A. Hattab, M.O. Aboelfotoh, G. Tremblay, F. Meyer, J. Kolodzey, H.J. Osten, and C. Dubois:
Diffusion and electrical activity of copper in Si_{1-x-y}Ge_xC_y alloys
Microel. Engineer. **60** (2002) 283.
8. P. Zaumseil, E. Bugiel, J. P. Liu, and H. J. Osten:
Epitaxial growth of praseodymium oxide on silicon
Solid State Phenomen. **82-84** (2002) 789.
9. A. Goryachko, J.P. Liu, D. Krüger, H.J. Osten, E. Bugiel, R. Kurps, and V. Melnik:
Thermal stability of Pr₂O₃ films grown on Si(100) substrates
J. Vac. Sci & Techn. A **20** (2002) 1860.
10. H.-J. Müssig, J. Dąbrowski, K. Ignatovich, J. P. Liu, V. Zavodinsky, H. J. Osten:
Structure and stability of thin praseodymium oxide layers on Si(001)
Solid State Phenomen. **82-84** (2002) 783.
11. H.J. Osten, H. Rücker, J.P. Liu, and B. Heinemann
Wider latitude for sophisticated devices by incorporating carbon into crystalline Si or SiGe
Microelectronic Engineering **56** (2001) 209.
12. H. J. Osten, J. P. Liu, H.- J. Müssig, and P. Zaumseil
Epitaxial, high-K dielectrics on silicon: The example of praseodymium oxide
Microelectronic Reliability **41** (2001) 991.
13. H.J. Osten, J.P. Liu, E. Bugiel, H.J.Müßsig, and P. Zaumseil
Epitaxial growth of praseodymium oxide on silicon
Material Science and Engineer. B **87** (2001) 297.

14. H. J. Osten, D. Knoll, and H. Rücker
Dopant diffusion control by adding carbon into Si and SiGe: Principles and device application
Material Science and Engineer. B **87** (2001) 262.
15. H.J. Osten, J.P. Liu, P. Gaworzewski, E. Bugiel, and P. Zaumseil:
Pr₂O₃ - a new High-K dielectric (in Japanese)
NIKKEI Microdevices **2**, pp. 56 (2001).
16. S. M. Zhang, G.F. Niu, J.D. Cressler, H.J. Osten, D. Knoll, C.J. Marshall, P.W. Marshall, H.S. Kim, R.A. Reed:
The effects of proton irradiation on SiGe : C HBTs
IEEE Trans. on Nucl. Sci **48** (2001) 2233.
17. D. Knoll, B. Heinemann, K.E. Ehwald, H. Rücker, B. Tillack, and H.J. Osten:
Modular, high-performance BiCMOS by integration of SiGe:C HBTs
Proc. 2nd Int. Symposium on ULSI Process Integration, March 25-30, 2001, Washington D.C., USA, Electrochemical Society Proceedings Vol. 2001-2, p.165
18. P. Dollfus, S. Galdin, H.J. Osten, and P. Hesto:
Band offsets and electron transport calculation for strained Si_{1-x-y}Ge_xC_y/Si heterostructures
J. Material Science: Materials in Electronics **12** (2001) 245
19. J.P. Liu, P. Zaumseil, E. Bugiel, and H.J. Osten:
Epitaxial growth of Pr₂O₃ on Si (111), and the observation of a hexagonal to cubic phase transition during post-growth N₂ annealing
Appl. Phys. Lett. **79** (2001) 671.
20. H.J. Müssig and H.J. Osten:
Can praseodymium oxide be an alternative high-K gate dielectric?
Proceedings 2001 IEEE Integr. Reliability Workshop, Oct, 2001, Stanford, USA
21. H.J. Osten, E. Bugiel, J. Dąbrowski, A. Fissel, T. Guminskaya, J.P. Liu, H.J. Müssig, and P. Zaumseil
Epitaxial praseodymium Oxide: A new high-K dielectric
Proceedings IWGI (Tokyo), pp. 100 (2001)
22. H.J. Osten, J. Griesche, P. Gaworzewski, and K.D. Bolze:
Influence of interstitial carbon defects on electron transport in strained Si_{1-y}C_y layers on Si(001)
Appl. Phys. Lett. **76** (2000) 200.
23. K. Wittmaack, J. Griesche, H.J. Osten, and S.B. Patel:
In search of optimum conditions for the growth of sharp and shallow B-delta markers in Si by molecular beam epitaxy
J. Vac. Sci & Techn. B **18** (2000) 524.
24. H. Rücker, B. Heinemann, D. Knoll, and H.J. Osten:
Suppressed boron diffusion in carbon-doped SiGe heterojunction bipolar transistors
Int. Phys. Conf. Ser. **166** (2000) 287.
25. H.J. Osten:
SiGe:C alloys: Growth, properties, and HBT devices
Bulletin of the American Physical Society, Vol. 45 (2000) 585.
26. A. Fischer, H.J. Osten, and H. Richter:
An equilibrium model for buried SiGe strained layers
Solid-State Electronics **44** (2000) 869.
27. S. Teichert, M. Falke, H. Giesler, D.K. Sarkar, G. Beddies and H.-J. Hinneberg, G. Lippert, J. Griesche, and H. J. Osten:
Thin films of CoSi₂ on Si_{1-y}C_y Substrate Layers
Microelectronic Engineering **50** (2000) 193.

28. G. Grau, U. Langmann, W. Winkler, D. Knoll, H.J. Osten, and K. Pressel:
A current-folded up-conversion mixer and a CVO with center-tapped inductor in a SiGe-GBT technology for 5GHz wireless LAN application
IEEE J. Solid State Circuits 35 (2000) 1345.
29. H.J. Osten:
MBE growth and properties of supersaturated, carbon containing silicon/germanium alloys on Si(001)
Thin Solid Films 367 (2000) 101.
30. Y. Roichman, R. Brener, C. Cytermann, M. Eizenberg, and H.J. Osten:
Characterization of cobalt silicide contacts on Si_{1-y}C_y layers epitaxially grown on Si
J. Appl. Phys. 87 (2000) 3306.
31. D. Knoll, B. Heinemann, B. Tillack, P. Schley, H.J. Osten:
Comparison of SiGe and SiGe:C heterojunction bipolar transistors
Thin Solid Films 369 (2000) 342.
32. B. Heinemann, D. Knoll, G.G. Fischer, P. Schley and H.J. Osten
Comparative analysis of minority carrier transport in npn bipolar transistors with Si, Si_{1-x}Ge_x, and Si_{1-y}C_y base layers
Thin Solid Films 369 (2000) 347.
33. J.P. Liu and H.J. Osten:
Substitutional carbon incorporation during Si_{1-x-y}Ge_xC_y growth on Si(100) by MBE: Dependence on germanium and carbon concentration
Appl. Phys. Lett. 76 (2000) 3546.
34. S. Galdin, P. Dollfus, V. Fortuna, P. Hesto, and H.J. Osten:
Band offset predictions for strained group IV alloys: Si_{1-x-y}Ge_xC_y on Si(001) and Si_{1-x}Ge_x on Si_{1-z}Ge_z(001)
Semicon Sci & Techn. 15 (2000) 565
35. H.J. Osten, G. Lippert, J.P. Liu, and D. Krüger
The influence of carbon incorporation on dopant surface segregation in Si molecular beam epitaxial growth
Appl. Phys. Lett. 77 (2000) 2000.
36. P. Dollfus, S. Galdin, H.J. Osten, and P. Hesto:
Band offsets and electron transport calculation for strained Si_{1-x-y}Ge_xC_y/Si heterostructures
Proc. 3rd ICMM, (IOM Communications), p.143 (2000).
37. A. Hattab, M. Barthula, F. Meyer, P. Warren, and H.J. Osten:
Distribution of barrier heights in W/Si_{1-x-y}Ge_xC_y schottky diodes
Proc. 3rd ICMM, (IOM Communications), p. 247 (2000).
38. H. Rücker, B. Heinemann, R. Kurps, D. Krüger, and H.J. Osten:
Probing point defects in silicon by diffusion of supersaturated carbon
Proc. MRS Meeting, San Francisco, April 2000
39. H.J. Osten, J.P. Liu, P. Gaworzewski, E. Bugiel, and P. Zaumseil:
High-K gate dielectrics with ultra-low leakage current based on praseodymium oxide
Techn. Digest IEDM 2000, pp. 653
40. H.J. Osten, D. Knoll, B. Heinemann, G. Lippert, and P. Schley:
Increasing process margin in SiGe heterobipolar technology by adding carbon
IEEE Trans. Electron. Dev. 46 (1999) 1910.
41. H.J. Osten:
Si_{1-x-y}Ge_xC_y alloys: Growth and properties of a new semiconducting material
Progresses in Solid State Physics, Vol. 38, Vieweg & Sohn 1999 , 101-110

42. B. Garrido, J.R. Morante, M. Franz, K. Pressel, D. Krüger, P. Zaumseil, and H.J. Osten:
Behavior of strained Si_{1-y}C_y layers grown on silicon during wet oxidation
J. Appl. Phys. **85** (1999) 833.
43. I.M. Anteney, G. Lippert, P. Ashburn, H.J. Osten, B. Heinemann, G.J. Parker, and D. Knoll:
Characterization of the effectiveness of carbon incorporation in SiGe for the elimination of parasitic energy barriers in SiGe HBTs
IEEE Electr. Dev. Lett. **20** (1999) 116.
44. H. Rücker, B. Heinemann, D. Bolze, R. Kurps, D. Krüger, G. Lippert, H.J. Osten:
The impact of supersaturated carbon on transient enhanced diffusion
Appl. Phys. Lett. **74** (1999) 3377.
45. F. Edelman, T. Raz, Y. Komem, P. Zaumseil, H.J. Osten, and M. Capitan:
Crystallization of amorphous Si_{0.5}Ge_{0.5} films studied by means of *in-situ* X-ray diffraction and *in-situ* transmission electron microscopy
Phil. Mag. A, Physics of Condensed Matter **79** (1999) 2617.
46. H.J. Osten, J. Griesche, and S. Scalese:
Substitutional carbon incorporation in epitaxial Si_{1-y}C_y alloys on Si(001) grown by MBE
Appl. Phys. Lett. **74** (1999) 836-838.
47. F. Edelman, T. Raz, Y. Komem, M. Stölzer, P. Werner, P. Zaumseil, H.J. Osten, J. Griesche, and M. Capitan:
Stability and transport properties of microcrystalline SiGe films
Thin Solid Films **337** (1999) 152.
48. S. Teichert, M. Falke, H. Giesler, G. Beddies, H.-J. Hinneberg, G. Lippert, J. Griesche, and H. J. Osten:
Silicide reaction of Co with Si_{0.999}C_{0.001}
Solid-State Electronics **43** (1999) 1051.
49. H. J. Osten, D. Knoll, B. Heinemann, H. Rücker, and B. Tillack:
Carbon doped SiGe heterojunction bipolar transistors for high frequency applications
Proceedings BCTM 1999, pp. 109.
50. G. Grau, U. Langmann, W. Winkler, D. Knoll, H.J. Osten, K. Pressel:
A current-folded up-conversion mixer and a CVO with center-tapped inductor in a SiGe-GBT technology for 5GHz wireless LAN application
Proceedings BCTM 1999, pp.161.
51. H.J. Osten:
Carbon-containing layers on Silicon: Growth, properties & application
Material Science Foundation vol 7, Trans Tech Publication, 1999 (book)
52. W. Winkler, J. Borngräber, H.B. Erzgräber, H.J. Erzgräber, B. Heinemann, D. Knoll, H.J. Osten, M. Pierschel, K. Pressel, and P. Schley:
Wireless communication integrated circuits with CMOS-compatible SiGe HBT technology modules
Proc. Custom Integrated Circuits Conference 1999, pp. 351
53. H. Rücker, B. Heinemann, D. Bolze, D. Knoll, D. Krüger, R. Kurps, H.J. Osten, P. Schley, B. Tillack, and P. Zaumseil:
Dopant diffusion in C-doped Si and SiGe: Physical model and experimental verification
Techn. Digest IEDM 1999, pp. 345.
54. K.E. Ehwald, D. Knoll, B. Heinemann, K. Chang, J. Kirchgessner, R. Mauntel, Ik-Sung Lim, J. Steele, B. Tillack, A. Wolff, K. Blum, W. Winkler, M. Pierschel, F. Herzel, U. Jagdhold, P. Schley, R. Barth, and H.J. Osten:
Modular integration of high-performance SiGe:C-HBTs in a deep submicron, epi-free CMOS process
Techn. Digest . IEDM 1999, pp. 561.

-
55. H.J. Osten:
Band gap changes and band offsets for ternary $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ alloys on Si(001)
J. Appl. Phys. **84** (1998) 2716.
56. H. Rücker, B. Heinemann, W. Röpke, R. Kurps, G. Lippert, and H.J. Osten:
Suppressed diffusion of boron and carbon in carbon-rich Silicon
Appl. Phys. Lett. **73** (1998) 1682.
Erratum: Appl. Phys. Lett. **75** (1999) 147.
57. I.A. Anteney, P. Ashburn, G.J. Parker, G. Lippert, and H.J. Osten:
Effect of the carbon position in the base for the elimination of parasitic energy barriers in SiGe HBTs
Proceedings ESSDERC 1998, pp 133.
58. H.J. Osten, B. Heinemann, D. Knoll, G. Lippert, and H. Rücker:
Effect of carbon on boron diffusion in SiGe: Principles and impact on bipolar devices
J. Vac. Sci. & Technol. **16** (1998) 1750.
59. H.J. Osten, R. Barth, G. Fischer, B. Heinemann, D. Knoll, G. Lippert, H. Rücker, P. Schley, and W. Röpke:
Carbon-containing group IV heterostructures on Si: Properties and device applications
Thin Solid Films **321** (1998) 11.
60. G. Lippert, H.J. Osten, K. Blum, R. Sorge, P. Schley, D. Krüger, and G. Fischer:
Optimized process conditions for MBE-grown SiGe(C) devices
Thin Solid Films **321** (1998) 21.
61. K. Pressel, M. Franz, D. Krüger, H.J. Osten, B. Garrido, and J.R. Morante:
Oxidation of $\text{Si}_{1-y}\text{C}_y$ strained layers grown on Si(001)
J. Vac. Sci. Technol. B **16** (1998) 1757.
62. H.J. Osten, D. Knoll, B. Heinemann, and B. Tillack:
Carbon doping of SiGe HBTs
Proc. of the 1998 Topical Meeting on "Silicon Monolithic Integrated Circuits in RF Systems, IEEE, Ed. S. Kayali, pp. 19, 1998
63. D. Knoll, B. Heinemann, R. Barth, K. Blum, J. Drews, A. Wolff, P. Schley, D. Bolze, B. Tillack, G. Kissinger, W. Winkler, and H.J. Osten:
Low cost, 50 GHz f_{\max} Si/SiGe heterojunction bipolar transistor technology with epi-free collector wells
Proceedings ESSDERC 1998, pp. 142
64. D. Knoll, B. Heinemann, H.J. Osten, K.E. Ewald, B. Tillack, P. Schley, R. Barth, M. Matthes, K.S. Park, Y. Kim, and W. Winkler:
Si/SiGe:C heterojunction bipolar transistors in an epi-free well, single-polysilicon technology
Techn. Digest IEDM 98,703 (1998).
65. H.J. Osten, M. Kim, G. Lippert, and P. Zaumseil:
Ternary SiGeC alloys: Growth and properties of a new semiconducting material
Thin Solid Films **294** (1997) 93.
66. H.J. Osten and P. Gaworzewski:
Charge transport in strained $\text{Si}_{1-y}\text{C}_y$ and $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ alloys on silicon
J. Appl. Phys. **82** (1997) 4997.
67. H.J. Osten, E. Bugiel, and P. Zaumseil:
Self-organization during $\text{Si}_{1-y}\text{C}_y$ alloy layer growth on Si(001)
J. Appl. Phys. **82** (1997) 231.

-
68. H.J. Osten and E. Bugiel:
Relaxed $\text{Si}_{1-x}\text{Ge}_x/\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ buffer structures with low threading dislocation density
Appl. Phys. Lett. **70** (1997) 2813.
69. H.J. Osten, G. Lippert, P. Gaworzewski, and R. Sorge:
Impact of low carbon concentrations on the electrical properties of highly boron doped SiGe layers
Appl. Phys. Lett **71** (1997) 1522.
70. M. Kim and H.J. Osten:
X-ray photoelectron spectroscopic evaluation of valence band offsets for strained $\text{Si}_{1-x}\text{Ge}_x$, $\text{Si}_{1-y}\text{C}_y$, and $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ on Si(001)
Appl. Phys. Lett. **70** (1997) 2702.
71. G. Lippert, P. Zaumseil, H.J. Osten, and M. Kim:
Enhancement of substitutional carbon incorporation in hydrogen-mediated pseudomorphic growth of strained alloy layers on Si(001)
J. Crystal Growth **175/176** (1997) 473.
72. K. Pressel, G.G. Fischer, P. Zaumseil, M. Kim, and H.J. Osten:
Infrared spectroscopy of strained $\text{Si}_{1-y}\text{C}_y$ alloys grown on silicon
Thin Solid Films **294** (1997) 133.
73. H.J. Osten:
Growth and properties of supersaturated, carbon containing silicon and silicon/germanium alloys on Si(001) (Review)
Current Topics in Crystal Growth Research, **3** (1997) 125.
74. J. Falta, D. Bahr, A. Hille, G. Materlik, and H.J. Osten:
Strain induced interface roughness of $\text{Si}_{1-y}\text{C}_y$ layers on Si(001)
Appl. Phys. Lett. **71** (1997) 3525.
75. H.J. Osten, G. Lippert, B. Heinemann, R. Barth, H. Rucker, and P. Schley:
The effect of carbon incorporation on SiGe HBT performance and process margins
Techn. Digest IEDM 97, pp. 803 (1997)
76. H.J. Osten:
Supersaturated carbon in silicon and silicon germanium alloys
Material Science & Engineering B **36** (1996) 268.
77. H.J. Osten, D. Endisch, E. Bugiel, B. Dietrich, G.G. Fischer, M. Kim, D. Krüger, P. Zaumseil:
Strain relaxation in tensile strained $\text{Si}_{1-y}\text{C}_y$ layers on Si(001)
Semicond Sci & Technol. **11** (1996) 1678.
78. H.J. Osten, Myeongcheol Kim, K. Pressel, and P. Zaumseil:
Substitutional versus interstitial carbon incorporation during pseudomorphic growth of $\text{Si}_{1-y}\text{C}_y$ on Si(001)
J. Appl. Phys. **80** (1996) 6711.
79. H. Rucker, M. Methfessel, B. Dietrich, K. Pressel, and H.J. Osten
Phonons as a probe of short-range order in $\text{Si}_{1-y}\text{C}_y$ alloys
Phys. Rev. B **53** (1996) 1302.
80. K. Pressel, B. Dietrich, H. Rucker, M. Methfessel, and H.J. Osten:
Optical investigations of $\text{Si}_{1-y}\text{C}_y$ alloys
Material Science & Engineering B **36** (1996) 167.
81. W. Kissinger, H.J. Osten, M. Weidner, and M. Eichler:
Critical points of $\text{Si}_{1-y}\text{C}_y$ and $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ layers strained pseudomorphically on Si(001)
J. Appl. Phys. **79** (1996) 3016.

-
82. M. Kim, H.J. Osten, A. Wolff, C. Quick, H.P. Zeindl, J. Klatt, D. Knoll:
The growth of nanometer Si/SiGe/Si quantum well wires with local molecular beam epitaxy in dependence on the shadow mask geometry
J. Cryst. Growth **167** (1996) 508.
83. M. Kim, H.J. Thieme, G. Lippert, and H.J. Osten:
Optical in-situ measurements of temperature and layer thickness in Si MBE
J. Crystal Growth **80** (1996) 681.
84. M. Kim, G. Lippert, and H.J. Osten:
X-ray photoelectron spectroscopic investigations of carbon incorporation and segregation during pseudomorphic growth of Si_{1-y}C_y on Si(001)
J. Appl. Phys. **80** (1996) 5748.
85. H.J. Osten:
Neue Möglichkeiten zur Herstellung künstlicher kristalliner Schichtsysteme
Journal Wissenschaftsgemeinschaft Blaue Liste **1** (1996) 10.
86. W. Kissinger, M. Weidner, H.J. Osten, and M. Eichler:
Critical points of strained Si_{1-y}C_y layers on Si(001)
Solid State Phenomena **47&48** (1996) 523.
87. E. Bugiel, S. Ruvimov, and H.J. Osten:
TEM analysis of structure modification induced by additional carbon incorporation in silicon and Si_{1-x}Ge_x layers grown with molecular beam epitaxy
Solid State Phenomena **47&48** (1996) 595.
88. H.J. Osten:
SiGeC materials
1996 IEEE Proc. Semicond & Semi-Insulating Materials Conference, p. 195, Ed. C. Fontaine, IEEE 1996
89. D. Krüger and H.J. Osten:
Surface segregation of boron atoms in Si- and Si_{1-x}Ge_x-layers during MBE-growth: Experiment and simulation
Thin Solid Films **258** (1995) 137.
90. G. Lippert, H.J. Thieme, and H.J. Osten:
Soft cleaning by in vacuo ultraviolet radiation combined with molecular hydrogen gas before molecular beam epitaxial layer growth
J. Electrochem. Soc. **142** (1995) 191.
91. G. Lippert, H. J. Osten, D. Krüger, P. Gaworzewski, and K. Eberl:
Heavy Phosphorous doping in molecular beam epitaxial grown silicon with a GaP decomposition source
Appl. Phys. Lett. **66** (1995) 3197.
92. G.G. Fischer, P. Zaumseil, E. Bugiel, and H.J. Osten:
High temperature behavior of strained Si_{1-y}C_y/Si heterostructures
J. Appl. Phys. **77** (1995) 1934.
93. D. Endisch, H.J. Osten, P. Zaumseil, and M. Zinke-Allmang:
Backscattering analysis of Si_{1-y}C_y layers using the ¹²C(⁴He, ⁴He)¹²C resonance
Nuclear Instr. & Methods B **100** (1995) 125.
94. H.J. Osten, B. Dietrich, H. Rücker, and M. Methfessel:
Local structure of strain-compensated epitaxial Si_{1-x-y}Ge_xC_y layers on Si(001) grown with molecular beam epitaxy
J. Cryst. Growth **150** (1995) 931.

-
95. S. Ruvimov, E. Bugiel, and H.J. Osten:
Structural characterization of Si_nC δ -layers embedded in a silicon matrix
J. Appl. Phys. **78** (1995) 2323.
 96. H.J. Osten, M. Methfessel, G. Lippert, and H. Rucker:
Observation of the formation of a carbon-rich surface in silicon
Phys. Rev. B **52** (1995) 12179.
 97. S.C. Jain, H.J. Osten, B. Dietrich, and H. Rucker:
Growth and properties of strained $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ layers (Review)
Semicon Sci & Technol. **10** (1995) 1289.
 98. H.J. Osten, W. Kissinger, M. Weidner, and M. Eichler:
Optical transition in strained $\text{Si}_{1-y}\text{C}_y$ and $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ layers on Si(001)
Mat. Res. Soc. Symp. Proc. Vol. **379** (1995) 199.
 99. G. Lippert, H.J. Osten, and D. Krüger:
Heavy phosphorus doping in molecular beam epitaxial grown silicon/germanium with a GaP decomposition source
Mat. Res. Soc. Symp. Proc. Vol. **379** (1995) 411.
 100. H.J. Osten, H. Rucker, M. Methfessel, and S. Ruvimov:
Strain-stabilized structures on silicon grown with MBE
J. Crystal Growth **157** (1995) 405.
 101. G. Lippert, H.J. Osten, and D. Krüger:
Phosphorus doping in molecular beam epitaxial grown silicon-silicon/germanium using a GaP decomposition source
J. Crystal Growth **157** (1995) 304.
 102. E. Bugiel, S. Ruvimov, and H.J. Osten:
TEM characterization of $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ and $\text{Si}_{1-y}\text{C}_y$ layers grown with molecular beam epitaxy on (001)Si substrates
Inst. Phys. Conf. Ser. **146** (1995) 301.
 103. D. Krüger, G. Lippert, R. Kurps, and H.J. Osten:
Lateral inhomogeneous boron segregation during silicon thin film growth with molecular beam epitaxy
J. Crystal Growth **135** (1994) 246.
 104. J. Klatt, D. Krüger, E. Bugiel, and H.J. Osten:
Boron-controlled solid phase epitaxy of germanium on silicon: A new nonsegregating surfactant
Appl. Phys. Lett. **64** (1994) 360.
 105. H.J. Osten, E. Bugiel, B. Dietrich, and W. Kissinger:
Impurity-mediated growth and characterization of thin pseudomorphic germanium layers in silicon
Appl. Phys. Lett. **64** (1994) 1723.
 106. H.J. Osten:
Kinetic suppression of islanding in impurity-mediated growth of germanium on silicon
Appl. Phys. Lett. **64** (1994) 2356.
 107. H.J. Osten, E. Bugiel, P. Zaumseil:
The growth of an inverse tetragonal distorted SiGe layer on Si(001) by adding small amounts of carbon
Appl. Phys. Lett. **64** (1994) 3440.
 108. K. Schmalz, I.N. Yassievich, H. Rucker, H.G. Grimmeiss, H. Frankenfeld, W. Mehr, H.J. Osten, and P. Schley:
Characterization of $\text{Si}/\text{Si}_{1-x}\text{Ge}_x/\text{Si}$ quantum wells by space charge spectroscopy
Phys. Rev. B **50** (1994) 14287.

-
109. B. Dietrich, H.J. Osten, H. Rücker, M. Methfessel, and P. Zaumseil:
Lattice distortion in a strain compensated $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ layer on silicon
Phys. Rev. B 49 (1994) 17185.
110. W. Kissinger, H.J. Osten, G. Lippert, B. Dietrich, E. Bugiel:
Dependence of the interface sharpness of a Ge single quantum well on molecular beam epitaxial growth conditions
J. Appl. Phys. 76 (1994) 8042.
111. H. Rücker, M. Methfessel, E. Bugiel, and H.J. Osten:
Strain-stabilized highly-concentrated pseudomorphic $\text{Si}_{1-y}\text{C}_y$ layers in Si
Phys. Rev. Lett. 72 (1994) 3578.
112. H.J. Osten, E. Bugiel, and P. Zaumseil:
Antimony-mediated growth of epitaxial $\text{Ge}_{1-y}\text{C}_y$ layers on S(001)
J. Cryst. Growth 142 (1994) 322.
113. H.J. Osten and J. Klatt:
***In situ* monitoring of strain relaxation during antimony-mediated growth of Ge and $\text{Ge}_{1-y}\text{C}_y$ layers on Si(001) using reflection high energy electron diffraction**
Appl. Phys. Lett. 65 (1994) 630.
114. H.J. Osten:
Modification of growth modes in lattice-mismatched epitaxial systems: Si/Ge
physica status solidi (a) 145 (1994) 235.
115. K. Schmalz, H. Rückert, I.N. Yassievich, H.G. Grimmeiss, B. Dietrich, H. Frankenfeld, W. Mehr, H.J. Osten, and P. Schley:
Characterization of the valence band offset in p-Si/ $\text{Si}_{1-x}\text{Ge}_x$ /Si by space charge spectroscopy
Solid-State Electronics 37 (1994) 945.
116. W. Kissinger, H.J. Osten, G. Lippert, B. Dietrich, and E. Bugiel:
Characterization of very thin MBE-grown Ge epilayers on (100)Si
Proc. SPIE 2141 (1994) 135.
117. H.J. Osten, H.P. Zeindl, and E. Bugiel:
Considerations about the critical thickness for pseudomorphic $\text{Si}_{1-x}\text{Ge}_x$ Growth on Si(001)
J. Crystal Growth 143 (1994) 194.
118. W. Kissinger, M. Weidner, H.J. Osten, and M. Eichler:
Optical transition in strained $\text{Si}_{1-y}\text{C}_y$ layers on Si(001)
Appl. Phys. Lett. 65 (1994) 3356.
119. H. Rücker, M. Methfessel, B. Dietrich, H.J. Osten, and P. Zaumseil:
Atomic structure and lattice dynamics of strain-compensated $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ layers
Superlattices and Microstructure 16 (1994) 121.
120. H.J. Osten, J. Klatt, G. Lippert, and E. Bugiel:
Surfactant-mediated growth of germanium on Si(100) by MBE and SPE
J. Cryst. Growth 127 (1993) 396.
121. G. Lippert and H.J. Osten:
***In situ* cleaning of Si surfaces by UV/Ozone**
J. Cryst. Growth 127 (1993) 476.
122. E. Bugiel, B. Dietrich, and H.J. Osten:
Molecular beam epitaxy of strained $\text{Si}_{1-x}\text{Ge}_x$ layers on patterned substrates
J. Crystal Growth 130 (1993) 611.

-
123. B. Dietrich, E. Bugiel, J. Klatt, G. Lippert, T. Morgenstern, H.J. Osten, and P. Zaumseil:
Measurements of stress and relaxation in $\text{Si}_{1-x}\text{Ge}_x$ layers by RAMAN line shift and x-ray diffraction
J. Appl. Phys. **74** (1993) 3177.
124. H.J. Osten, J. Klatt, G. Lippert, E. Bugiel, and S. Higuchi:
Surfactant-mediated growth of germanium on silicon with submonolayer coverage of Sb and Te
J. Appl. Phys. **74** (1993) 2507.
125. G. Lippert, D. Krüger, H.P. Zeindl, J. Ramm, E. Bugiel, and H.J. Osten:
Problems of contamination prior and during Si-MBE
Mat. Res. Soc. Proc. Vol. **315** (1993) 85.
126. E. Bugiel, P. Zaumseil, B. Dietrich, and H.J. Osten:
Relaxation phenomena of strained $\text{Si}_{1-x}\text{Ge}_x$ layers on planar and patterned Si substrates
Inst. Phys. Conf. Ser. **134**, Section 6 (1993) 333.
127. B. Dietrich, E. Bugiel, H.J. Osten, and P. Zaumseil:
Raman-investigations of elastic strain relief in $\text{Si}_{1-x}\text{Ge}_x$ layers on patterned silicon substrates
J. Appl. Phys. **74** (1993) 7223.
128. E. Bugiel, P. Zaumseil, B. Dietrich, and H.J. Osten:
Relaxation phenomena in strained $\text{Si}_{1-x}\text{Ge}_x$ layers on planar and differently patterned Si substrates
Solid State Phenomena **32&33** (1993) 451.
129. B. Dietrich, E. Bugiel, H.J. Osten, and P. Zaumseil:
Micro-Raman investigations of elastic and plastic strain relief in $\text{Si}_{1-x}\text{Ge}_x$ heterostructures
Solid State Phenomena **32&33** (1993) 577.
130. H.P. Zeindl, G. Lippert, J. Drews, R. Kurps, and H.J. Osten:
Reduction of interfacial carbon and boron contamination as sources for degradation of epitaxial SiGe layers grown by MBE
Solid State Phenomena **32&33** (1993) 117.
131. H.J. Osten.
Molekularstrahl-Epitaxie von Silizium-Germanium-Schichtsystemen
in "Nanostrukturen und dünne Schichten", Herausgeber A. Schlachetzki, H. Kunzmann,
PTB-Bericht, Braunschweig 1993, pp. 141.
132. K. Schmalz, H. Rücker, H.G. Grimmeiss, B. Dietrich, H. Frankenfeld, W. Mehr, H.J. Osten,
and P. Schley:
Characterization of MBE grown $\text{Si}/\text{Si}_{1-x}\text{Ge}_x/\text{Si}$ structures using n^+p -diodes
Solid State Phenomena **32&33** (1993) 595.
133. H.J. Osten:
Modelling of silicon molecular beam epitaxy on Si(100)
Thin Solid Films **215** (1992) 14.
134. H.J. Osten, G. Lippert, and J. Klatt:
The influence of surfactants on growth modes in MBE: The growth of germanium layers on Si(100)
J. Vac. Sci. and Technol. B **10** (1992) 1151.
135. H.J. Osten, J. Klatt, G. Lippert, E. Bugiel, and S. Hinrich:
Two-dimensional lattice mismatched heteroepitaxy of germanium on silicon beyond the critical thickness by introducing a surfactant
Appl. Phys. Lett. **60** (1992) 2252.

136. D. Krüger, R. Kurps, H.J. Osten, G. Lippert, and D. Röser:
Characterization of surfactant introduction into Ge rich Si_{1-x}Ge_x MBE layers growth on silicon using secondary ion mass spectrometry and Auger electron spectroscopy
Thin Solid Films **221** (1992) 61.
137. H.J. Osten, J. Klatt, G. Lippert, B. Dietrich, and E. Bugiel:
Surfactant-controlled solid phase epitaxy of germanium on silicon
Phys. Rev. Lett. **69** (1992) 450.
138. H.J. Osten, E. Bugiel, and J. Klatt:
Suppressing of island formation in surfactant-controlled solid phase epitaxy of germanium on Si(100)
Appl. Phys. Lett. **61** (1992) 1918.
139. H.J. Osten, J. Klatt, G. Lippert, E. Bugiel, and B. Dietrich:
The influence of surfactants on the growth of Ge layers on silicon surfaces by MBE
Mat. Res. Soc. Proc. Vol. **263** (1992) 17.
140. H.J. Osten, J. Klatt, and G. Lippert:
Van der Waals epitaxy of thick Sb, Ge, and Ge/Sb films on mica
Appl. Phys. Lett. **60** (1992) 44.
141. H.J. Osten, J. Klatt, and G. Lippert:
Germanium and antimony epitaxy with large lattice misfit
Solid State Phenomena, **19&20** (1991) 605.

1.2. Invited Talks

1. H.J. Müssig, J. Dabrowski, H.J. Osten:
Gate-dielektrische Schichten: Ultradünnes SiO₂ und alternative Materialien
Kolloquium des Instituts für Kristallografie der Ludwig-Maximilians-Universität München,
Nov. 2001
2. H.J. Osten, E. Bugiel, J. Dąbrowski, A. Fissel, T. Guminskaya, J.P. Liu, H.J. Müssig,
and P. Zaumseil:
Epitaxial praseodymium oxide: A new high-K dielectric
International Workshop on Gate Insulators (IWGI), Tokyo, Nov. 2001
3. H.J. Müssig and H.J. Osten:
Can praseodymium oxide be an alternative high-K gate dielectric?
2001 International Integrated Reliability Workshop, Lake Tahoe, Oct. 2001
4. H.J. Osten:
Die Renaissance des Germaniums in der Mikroelektronik
Festvortrag auf dem 25. Clemens-Winkler-Kolloquium, Okt. 2001, Freiberg
5. H.J. Osten:
Neue Materialien für die Mikroelektronik: Von Silizium und Germanium über Kohlenstoff bis zum Praseodym.
Vortrag vor dem Rotary-Club, Sept. 2001
6. D. Knoll, B. Heinemann, K.E. Ehwald, H. Rücker, B. Tillack, and H.J. Osten:
Modular, high-performance BiCMOS by integration of SiGe:C HBTs
199th Electrochemical Society Meeting, March 2001
7. H. J. Osten, D. Knoll, and H. Rücker
Dopant diffusion control by adding carbon into Si and SiGe: Principles and device application
2001 Lawrence Symposium "Critical Issues in Epitaxy", Jan. 2001, Scottsdale (USA)

8. H. J. Osten, D. Knoll, B. Heinemann, H. Rücker, and K.E. Ehwald:
Carbon doped SiGe heterojunction bipolar transistor module suitable for integration in a deep submicron CMOS process
2000 Asia-Pacific Microwave Conference, Sydney (Australia) Dec. 2000
9. H.J. Osten:
SiGeC for telecommunication
CHiPPS 2000, May 2000, Wandlitz
10. H.J. Osten:
Isotopenreines Silizium in der Mikroelektronik
Leipniz-Sozietät, April 2000, Berlin
11. H.J. Osten:
SiGe:C Alloys: Growth, properties, and HBT devices
Annual Meeting of the American Physical Society, Minneapolis, March 2000.
12. H.J. Osten:
Improved dopant diffusion control in SiGe heterostructure devices by carbon co-doping
Europractice Workshop "High-Speed Circuit Technologies beyond 3 GHz, Ulm, Febr. 2000
13. D. Knoll, B. Heinemann, K.-E. Ehwald, H. Rücker, B. Tillack, W. Winkler, and H.J. Osten:
IHP's SiGe(C) HBT technology - a status report
Research Institute of Electrical Communication, University Tohoku, Sept. 1999, Japan
14. H. J. Osten, D. Knoll, B. Heinemann, H. Rücker, and B. Tillack:
Carbon doped SiGe heterojunction bipolar transistors for high frequency applications
BCTM 1999, Minneapolis
15. W. Winkler, J. Borngräber, He. Erzgräber, Ha. Erzgräber, B. Heinemann, D. Knoll, H.J. Osten, M.Pierschel, K. Pressel, and P. Schley:
Wireless communication integrated circuits with CMOS-compatible SiGe HBT technology modulus
CICC 99, May 1999, San Diego
16. H.J. Osten:
MBE growth and properties of supersaturated, carbon containing silicon/germanium alloys on Si(001)
3rd International Workshop on Molecular Beam Epitaxy - Growth Physics and Technology, Warszawa, May 1999
17. H. Rücker, B. Heinemann, D. Knoll, and H. J. Osten:
Suppression of boron diffusion by carbon: A new route for advanced heterobipolar transistors
ISCS 1999, Berlin
18. W. Winkler, J. Borngräber, H.B. Erzgräber, H.J. Erzgräber, B. Heinemann, D. Knoll, H.J. Osten, M. Pierschel, K. Pressel, and P. Schley
Wireless communication integrated circuits with CMOS-compatible SiGe HBT technology modules
Siemens Dresden, Monthly Meeting Lithography and Process Technology, June 1999
19. H.J. Osten
SiGe(C) HBTs in an epi-free n-well, single-polysilicon technology
Meeting at Motorola, Phoenix, AZ, Nov. 1998
20. K. Wittmack, J. Griesche, H.J. Osten, and S.B. Patel:
Sharp and shallow B-delta layers for stuying depth resolution and artefacts in SIMS depth profiling
11th European Workshop on SIMS, Münster, Okt. 1998

21. H.J. Osten, D. Knoll, B. Heinemann, and B. Tillack:
Carbon doping of SiGe HBTs
IEEE Meeting "Silicon Monolithic Integrated Circuits in RF Systems Ann Arbor, Michigan (USA),
Sept. 1998
22. H.J. Osten:
Si_{1-x-y}Ge_xC_y-Schichten: Herstellung und Eigenschaften eines neuen Halbleitermaterials
DPG-Jahrestagung, Regensburg 1998
23. H.J. Osten:
Increasing process margin in SiGe heterobipolar technology by adding carbon
GAPS-Conference, Toulouse, April 1998
24. H.J. Osten:
SiGeC materials
IEED- SIMC-9, Toulouse, May 1996
25. H.J. Osten, B. Heinemann, D. Knoll, G. Lippert, and P. Schley
Increasing process margin in SiGe heterobipolar technology by adding carbon
SGS Thompson, Catania, Febr. 1998
26. H.J. Osten:
Carbon-containing materials: Growth, properties and application
GAPS-EPICURE Meeting "IV-IV Heterostructures", Orsay, April 1997
27. H.J. Osten, R. Barth, G. Fischer, B. Heinemann, D. Knoll, G. Lippert, H. Rücker, P. Schley,
and W. Röpkke:
Carbon-containing group IV heterostructures on Si: Properties and device applications
The Seventh International Symposium on Silicon Molecular Beam Epitaxy, July 13-17, Banff,
Alberta, Canada 1997
28. H.J. Osten:
Controlled layer deposition of SiGe and SiGe heterobipolar structures
Workshop on the Chemistry and Physics of Heterostructure Formation, Raleigh/NC, Dec. 1996
29. H.J. Osten:
Ternary SiGeC alloys - growth and properties of a new semiconducting material
E-MRS, Strasbourg, June 1996
30. H.J. Osten:
**The incorporation of carbon atoms into Si and SiGe layers - a new degree of freedom in
crystal and band structure**
Heterostructures de semiconducteurs IV-IV, Orsay, France, Oct. 1995
31. H. Rücker, M. Methfessel, B. Dietrich, K. Pressel, H.J. Osten:
Microstructure and lattice dynamics in alloys of Si, Ge, and C
Internat. Summer School: Phonons in crystalline structures of different dimensions, Kiev, Ukraine,
June 1995
32. H.J. Osten:
Supersaturated carbon in silicon and silicon/germanium alloys
E-MRS Meeting, Strasbourg May 1995
33. H.J. Osten:
Modification of growth modes in lattice-mismatched epitaxial systems: Si/Ge
TATF/HVITF Dresden 1994
34. H.J. Osten:
The role of foreign atoms in epitaxy
GORDON conference *Point Defects, Line Defects, and Interfaces in Semiconductors*,
New Hampshire 1994

35. H.J Osten:
Surfactants in epitaxial growth
GORDON conference "Epitaxial thin films" , New Hamshire 1993
36. H.J. Osten:
Vapor-phase epitaxy for Si/SiGe layers
7. deutsch-japanischen Forum "Informationstechnologien", Tokyo Nov. 1991
37. H.J. Osten:
Grundlagenuntersuchungen zur physikalischen Schichtherstellung am Institut für Halbleiterphysik (Review)
Institute of Semiconductors, Academia Sinica, Peking, 1990

1.3. Contributed Papers

1. D. Krüger, V. Melnik, E. Bugiel, P. Zaumseil, A. Goryachko, and H.J. Osten:
Characterization of ultra-thin high-K dielectrics for advanced Si CMOS technologies
SIMS Europe, Münster, 2002, Sept. 15-17, Germany
2. H.J. Müssig, J.P. Liu, H.-J. Osten:
Band alignment at crystalline Pr₂O₃/Si(001) heterojunctions
DPG-Frühjahrstagung, Regensburg, March 2002
3. H. J. Osten, J. P. Liu, E. Bugiel, H.- J. Müssig, and P. Zaumseil:
Epitaxial, high-K dielectrics on silicon: The example of praseodymium oxide
2001 Lawrence Symposium "Critical Issues in Epitaxy", Jan. 2001, Scottsdale (USA)
4. A. Hattab, M.O. Aboelfotoh, G. Tremblay, F. Meyer, J. Kolodzey, H.J. Osten, and C. Dubois:
Diffusion and electrical activity of copper on p-Si_{1-x-y}Ge_xC_y alloys
Materials for Advanced Metallization, March 2001, Sweden
5. A.Hattab, J.L. Perrossier, F.Meyer, H.J.Osten, J.Griesche:
Schottky barrier inhomogeneities at W-contacts to carbon-containing silicon/germanium alloy
E-MRS 2001, Strasbourg
6. A. Goryachko, J.P. Liu, D. Krüger, H.J. Osten, E. Bugiel, and R. Kurps:
AES and XPS study of thermally activated inter-diffusion in high-K dielectric Pr₂O₃ deposited on Si
Jahrestagung der DPG, Hamburg, März 2001
7. H.-J. Müssig, J. Dabrowski, K. Ignatovich, J. P. Liu, V. Zavodinsky und H. J. Osten
Anfangsphasen der Praseodymiumoxid-Abscheidung auf Si(001)
Jahrestagung der DPG, Hamburg, März 2001
8. P. Zaumseil, E. Bugiel, J. P. Liu, and H. J. Osten:
Epitaxial growth of praseodymium oxide on silicon
GADEST 2001, Catania (Italy), Sept. 2001
9. H.-J. Müssig, J. Dąbrowski, K. Ignatovich, J. P. Liu, V. Zavodinsky, H. J. Osten:
Structure and stability of thin praseodymium oxide Layers on Si(001)
GADEST 2001, Catania (Italy), Sept. 2001
10. E. Bugiel, J.P. Liu, and H. J. Osten:
TEM investigations of epitaxial praseodymium oxide on silicon
Advances in Focused Ion Beam Microscopy, March, 2001, Oxford, UK
11. E. Bugiel, J.P. Liu, and H. J. Osten:
TEM investigations of epitaxial praseodymium oxide on silicon
12th Int. Conference on Microscopy of Semiconducting Materials, 25.-29.03.2001, Oxford, UK

12. H.J. Müssig, J. Dabrowski, K. Ignatovich, J.P. Liu, V. Zavodinsky, and H.J. Osten:
Initial stages of praseodymium oxide film formation on Si(001)
11th Int. Conf. on Scanning Tunneling Microscopy / Spectroscopy and Related Techniques,
University of British Columbia, Vancouver, July, 2001, Canada
13. H.J. Osten, J. P. Liu, E. Bugiel, A. Fissel, H. J. Müssig, and P. Zaumseil
MBE growth of crystalline praseodymium oxide on Silicon
Deutscher MBE-Workshop, Zeuthen, Sept. 2001
14. A. Fissel, J. Dąbrowski, P. Zaumseil und H.J. Osten
Anwendungsmöglichkeiten der XPS zur Untersuchung des MBE-Wachstums von Schichten am Beispiel des Praseodymoxid
Deutscher MBE-Workshop, Zeuthen, Sept. 2001
15. A. Goryachko, V.P. Melnik, D. Krüger, H.J. Osten, E. Bugiel, P. Zaumseil, and R. Kurps
Thermally activated interdiffusion in high-K dielectric Pr₂O₃ deposited on Si
International Autumn School 2001 "Diffusion and Reactions at Solid-Solid Interfaces", September 2001, Halle
16. H. Rücker, B. Heinemann, R. Kurps, D. Krüger, H.J. Osten:
Probing point defects in silicon by diffusion of supersaturated carbon
MRS Spring Meeting, San Francisco, April 2000
17. S. Teichert, M. Falke, H. Giesler, D. Sakkar, G. Beddies, H.J. Hinneberg, G. Lippert, J. Griesche, and H. J. Osten:
Thin films Formation of CoSi₂ on Si_{1-y}C_y substrate layers
European Workshop Materials for Advanced Metallization, March 2000, Oostende, Belgium
18. H.J. Osten, H.Rücker, J.P. Liu, and B. Heinemann
Wider latitude for sophisticated devices by incorporating carbon into crystalline Si or SiGe
E-MRS Meeting, Strasbourg, May 2000
19. H. Rücker, B. Heinemann, R. Kurps, D. Krüger, and H.J. Osten:
Outdiffusion of supersaturated carbon as a probe of point defects in silicon
CHiPPS, Wandlitz, May 2000
20. A. Hattab, M. Barthula, F. Meyer, H.J. Osten, and P. Warren:
Barrier inhomogeneities of metal/SiGeC schottky diodes
Workshop "Heterostructures de semiconducteurs IV-IV", Orsay, June 2000
21. J. P. Liu, H. J. Osten, E. Bugiel, and P. Zaumseil:
MBE growth of binary epitaxial metal oxides on silicon: The example of praseodymium oxide
XI. International Conference on Molecular Beam Epitaxy, Beijing (China) Sept. 2000
22. H. J. Osten, J.P. Liu, D. Knoll, and H. Rücker:
Supersaturated carbon in Si and SiGe: A status report
XI. International Conference on Molecular Beam Epitaxy, Beijing (China) Sept. 2000
23. P. Dollfus, S. Galdin, H.J. Osten, and P. Hesto:
Band offsets and electron transport calculation for strained Si_{1-x-y}Ge_xC_y/Si heterostructures
3rd ICMM, Dublin, Oct. 2000.
24. A. Hattab, M. Barthula, F. Meyer, P. Warren, and H.J. Osten:
Distribution of barrier heights in W/Si_{1-x-y}Ge_xC_y schottky diodes
3rd ICMM, Dublin, Oct. 2000.
25. H. J. Osten, J. P. Liu, H.- J. Müssig, and P. Zaumseil
Epitaxial, high-K dielectrics on silicon: The example of praseodymium oxide
11th Workshop on Dielectrics in Microelectronics, Munich, Nov. 2000

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26. H.J. Osten, J.P. Liu, P. Gaworzewski, E. Bugiel, and P. Zaumseil:
High-K gate dielectrics with ultra-low leakage current based on praseodymium oxide
IEDM 2000, San Francisco, Dec. 2000
 27. A. Fischer, H.J. Osten, and H. Richter:
An equilibrium model for buried SiGe strained layers
E-MRS, Strasbourg, June, 1999, France
 28. W. Winkler, J. Borngräber, H.B. Erzgräber, H.J. Erzgräber, B. Heinemann, D. Knoll,
H.J. Osten, M. Pierschel, K. Pressel, and P. Schley:
**Wireless communication integrated circuits with CMOS-compatible SiGe HBT technology
modules**
AP ED MTT Soc. of IEEE, San Diego, May, 1999, USA
 29. G. Grau, U. Langmann, W. Winkler, D. Knoll, H.J. Osten, and K. Pressel:
**A current-folded up-conversion mixer and a CVO with center-tapped inductor in a SiGe-
GBT technology for 5GHz wireless LAN application**
BCTM 1999, Minneapolis, Sept. 1999
 30. D. Knoll, B. Heinemann, B. Tillack, P. Schley, and H.J. Osten:
Comparison of SiGe and SiGe:C heterojunction bipolar transistors
IJC-Si 1999, Miyagi (Japan), Sept. 1999
 31. B. Heinemann, D. Knoll, G.G. Fischer, P. Schley, and H.J. Osten
**Comparative analysis of minority carrier transport in npn bipolar transistors with Si, SiGe,
and SiGeC base layer.**
IJC-Si 1999, Miyagi (Japan), Sept. 1999
 32. H. Rücker, B. Heinemann, D. Bolze, D. Knoll, D. Krüger, R. Kurps, H.J. Osten, P. Schley,
B. Tillack, and P. Zaumseil:
Dopant diffusion in C-doped Si and SiGe: Physical model and experimental verification
IEDM 1999, Wahington DC, Dec. 1999
 33. K.E. Ehwald, D. Knoll, B. Heinemann, K. Chang, J. Kirchgessner, R. Mauntel, Ik-Sung Lim,
J. Steele, B. Tillack, A. Wolff, K. Blum, W. Winkler, M. Pierschel, F. Herzel, U. Jagdhold,
P. Schley, R. Barth, and H.J. Osten:
**Modular integration of high-performance SiGe:C-HBTs in a deep submicron, epi-free CMOS
process**
IEDM 1999, Washington DC, Dec. 1999
 34. D. Knoll, B. Heinemann, H.J. Osten, K.E. Ehwald, B. Tillack, P. Schley, R. Barth, M. Matthes, K.S.
Park, Y. Kim, and W. Winkler:
**Si/SiGe:C heterojunction bipolar transistors in an epi-free Well, single-polysilicon
technology**
IEDM 98, San Francisco Dec. 1998.
 35. I. Antenney, G. Lippert, P. Ashburn, H.J. Osten, G.J. Parker, and B. Heinemann:
Suppression of transient enhanced diffusion in SiGe HBTs by carbon incorporation
EPICURE-Meeting, Heterostructures, Orsay, France, Jan 1998
 36. H. Rücker, D. Bolze, B. Heinemann, D. Krüger, R. Kurps, G. Lippert und H.J. Osten:
**Modellierung des Einflusses von Implantationsschäden auf die Diffusion von Dotieratomen
in Si**
DPG-Jahrestagung, Regensburg 1998
 37. E. Bugiel, H.J. Osten und P. Zaumseil:
Selbstorganisation beim SiC-Schichtwachstum auf Si(001) durch Koverdampfen
DPG-Jahrestagung, Regensburg 1998

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38. D. Knoll, B. Heinemann, R. Barth, K. Blum, J. Drews, A. Wolff, P. Schley, D. Bolze, B. Tillack, G. Kissinger, W. Winkler, and H.J. Osten:
Low cost, 50 GHz f_{\max} Si/SiGe heterojunction bipolar transistor technology with epi-free collector wells
ESSDERC 1998, Bordeaux, Sept. 1998
 39. I.A. Anteney, P. Ashburn, G.J. Parker, G. Lippert, and H.J. Osten:
Effect of the carbon position in the base for the elimination of parasitic energy barriers in SiGe HBTs
ESSDERC 1998, Bordeaux, Sept. 1998
 40. Y. Roichman, R. Brener, C. Cytermann, M. Eizenberg, and H.J. Osten:
Characterization of Co Silicide on $\text{Si}_{1-y}\text{C}_y$ (100) epi-layer
AGIL, Conference of the Material and Vacuum Society in Israel, April 1998
 41. H. Rucker, B. Heinemann, W. Ropke, R. Kurps, D. Kruger, G. Lippert, and H.J. Osten:
Suppressed Diffusion of B and C in Carbon rich Silicon
GORDON conference *Point Defects, Line Defects, and Interfaces in Semiconductors*, New Hampshire 1998
 42. S. Teichert, M. Falke, H. Giesler, G. Beddies, H. J. Hinneberg, G. Lippert, J. Griesche, and H. J. Osten:
Silicide reaction of Co with $\text{Si}_{0.999}\text{C}_{0.001}$
E-MRS, Strasbourg, June 1998
 43. F. Edelmann, Y. Komem, H.J. Osten, J. Griesche, T. Raz, M. Stolzer, and P. Zaumseil:
Transport properties of microcrystalline p- and n-SiGe films
XVII. Intern. Conference on Thermoelectrics, Nagoya, 1998
 44. H.J. Osten, G. Lippert, B. Heinemann, R. Barth, H. Rucker, and P. Schley:
The effect of carbon incorporation on SiGe HBT performance and process margins
IEDM 97, Washington DC, Dec. 1997
 45. B. Heinemann, D. Knoll, G. Fischer, D. Kruger, G. Lippert, H.J. Osten, H. Rucker, W. Ropke, P. Schley, and B. Tillack:
Control of steep boron profiles in Si/SiGe heterojunction bipolar transistors
ESSDERC 97, Stuttgart, Sept. 97
 46. G. Lippert, H.J. Osten, E. Bugiel, K. Blum, R. Sorge, P. Schley, H. Erzgraber, D. Kruger, and G. Fischer:
Optimized process conditions for MBE-grown SiGe(C) devices
7th International Symposium on Silicon Molecular Beam Epitaxy, Banff, Alberta, Canada, July 1997
 47. H.J. Osten, G. Fischer, B. Heinemann, D. Knoll, G. Lippert, W. Ropke, and H. Rucker:
Effect of carbon on boron diffusion in SiGe: Principles and impact on bipolar devices
Workshop on Si Heterostructures, Barga, Italy 1997
 48. K. Pressel, B. Garrido, M. Franz, D. Kruger, J.R. Morante, H.J. Osten:
Oxidation of $\text{Si}_{1-y}\text{C}_y$ strained layers grown on Si(001)
Workshop on Si Heterostructures, Barga, Italy 1997
 49. H. Rucker, B. Heinemann, W. Ropke, G. Fischer, G. Lippert, and H.J. Osten:
Modeling the effect of carbon on boron diffusion
SISPAD 97, Cambridge (USA), Sept. 97
 50. I.M. Anteney, G. Lippert, P. Ashburn, H.J. Osten, B. Heinemann, and G.J. Parker
Electrical determination of bandgap narrowing and parasitic energy barriers in SiGe and SiGeC heterojunction bipolar transistors
IEEE Workshop, Nov. 97, London

51. H. Rücker, B. Heinemann, W. Röpke, G. Fischer, G. Lippert, H.J. Osten, and R. Kurps:
Suppression of boron diffusion in C-rich Si
Workshop CHIPPS 97, Wandlitz, Aug. 97
52. H.J. Osten, M. Methfessel, G. Lippert, and H. Rücker:
Easy diffusion of carbon into the silicon surface during MBE growth of carbon-rich layers
ICPS, Berlin, July 1996
53. H.J. Osten, M. Kim, G. Lippert, H. Rücker, and P. Zaumseil:
Growth and properties of $\text{Si}_{1-y}\text{C}_y$ alloy layers pseudomorphically strained on Si(001)
38th Electronic Materials Conference, Santa Barbara/CA, June 1996
54. H.J. Osten, M. Kim, and E. Bugiel:
Thickness and carbon concentration limits for pseudomorphically grown $\text{Si}_{1-y}\text{C}_y$ layers on Si(001)
MRS Spring Meeting, San Francisco, 1996
55. M. Kim, H.J. Osten, G. Lippert, and S. Nilson:
Carbon effects on the bandstructure in strained $\text{Si}_{1-y}\text{C}_y$ layers grown pseudomorphically on Si(001)
MRS Spring Meeting, San Francisco, 1996
56. B. Roos, H. Richter, H.J. Osten, B. Tillack, J. Wollweber, N. Abrosimov, and A. Wanner:
Mechanical properties of Si-Ge, Si-Ge-C, and Si-Ge-B alloys
MRS Spring Meeting, San Francisco, 1996
57. G. Lippert, P. Zaumseil, H.J. Osten, and M. Kim:
Enhancement of substitutional carbon incorporation in hydrogen-mediated pseudomorphic growth of strained alloy layers on Si(001)
MBE IX, Malibu/CA, Aug. 1996
58. K. Pressel, G.G. Fischer, P. Zaumseil, M. Kim, and H.J. Osten:
Infrared spectroscopy of strained $\text{Si}_{1-y}\text{C}_y$ alloys on silicon
E-MRS Meeting, Strasbourg, June 1996
59. W. Kissinger, M. Weidner, H.J. Osten, and M. Eichler:
Dielectric function and critical points of strained $\text{Si}_{1-y}\text{C}_y$ layers on Si(001)
GADEST 1995
60. H. Rücker, M. Methfessel, H.J. Osten, G. Lippert, B. Dietrich, and K. Pressel:
Theoretical and experimental study of the microscopic structure of $\text{Si}_{1-y}\text{C}_y$ strained layers
Intern. Symp. on Si Heterostructures, Heraklion, Greece Sept. 1995
61. K. Pressel, B. Dietrich, H. Rücker, M. Methfessel, and H.J. Osten:
Optical investigations of $\text{Si}_{1-y}\text{C}_y$ alloys
E-MRS Meeting, Strasbourg, France, 1995
62. H.J. Osten, H. Rücker, M. Methfessel, S. Ruvimov, E. Bugiel, and G. Lippert:
Strain-stabilized structures on Si grown with MBE
E-MRS Meeting, Strasbourg, France, 1995
63. G. Lippert, H.J. Osten, and D. Krüger:
Phosphorus doping in molecular beam epitaxy grown silicon-silicon/germanium using a GaP decomposition source
E-MRS Meeting, Strasbourg, France, 1995
64. G. Lippert, H.J. Osten, and D. Krüger:
Heavy phosphorus doping in molecular beam epitaxial grown silicon and silicon/germanium with a GaP decomposition source
MRS Spring meeting, San Francisco, USA, April 1995

-
65. H.J. Osten, W. Kissinger, M. Weidner, and M. Eichler:
Optical transition in strained $\text{Si}_{1-y}\text{C}_y$ and $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ layers on Si(001)
MRS Spring meeting, San Francisco, USA, April 1995
66. E. Bugiel, S. Ruvimov, and H.J. Osten:
TEM characterization of $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ and $\text{Si}_{1-y}\text{C}_y$ layers grown with molecular beam epitaxy on (001)Si substrates
MSM IX, Oxford, UK April 1995
67. B. Dietrich, H.J. Osten, H. Rucker, and M. Methfessel:
Raman scattering of $\text{Si}_{1-y}\text{C}_y$ alloys
Intern. Symp. Heterostructures in Science and Technol., Würzburg 1995
68. M. Weidner, M. Eichler, W. Kissinger, and H.J. Osten:
Spectroscopic ellipsometry for dielectric function and critical points of thin $\text{Si}_{1-y}\text{C}_y$ films on Si
Intern. Workshop on Spectr. Ellips. WISE 95, Erlangen 1995
69. H. Rucker, M. Methfessel, K. Pressel, B. Dietrich und H.J. Osten:
Atomare Struktur and Gitterdynamik epitaktischer $\text{Si}_{1-y}\text{C}_y$ Schichten
DPG Jahrestagung, Berlin März 1995
70. K. Pressel, B. Dietrich, H. Rucker, M. Methfessel und H.J. Osten:
Nahordnung in verspannten $\text{Si}_{1-y}\text{C}_y$ -Schichten
30. Arbeitskreis Punktdefekte, Stuttgart, Okt. 1995
71. M. Kim, G. Lippert und H.J. Osten:
Optische *in situ* Untersuchungen in der Si-MBE
MBE-Workshop Stuttgart 1995
72. W. Kissinger, H.J. Osten, B. Dietrich, and E. Bugiel:
Characterization of very thin MBE-grown Ge epilayers on Si(100)
SPIE, Los Angeles 1994
73. H. Rucker, M. Methfessel, H.J. Osten und E. Bugiel:
Theoretische Beschreibung und experimentelle Beobachtung hochkonzentrierter epitaktischer $\text{Si}_{1-y}\text{C}_y$ Schichten in Si
DPG-Jahrestagung Münster 1994
74. H.J. Osten:
Microscopic Structure of Strain-Compensated Epitaxial $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ Layers on Si(001) grown with MBE
SMI, Interface Formation and Dynamics in Layered Structures, May 1994, Toronto/Canada
75. K. Schmalz, H. Rucker, H.J. Osten, H.P. Zeindl, W. Kissinger, and I. Babanskaja:
Characterization of valence band offsets and deep levels in p-Si/SiGe/Si by space charge spectroscopy
EXMATEC, Mai 1994
76. H. Rucker, M. Methfessel, B. Dietrich, H.J. Osten, and P. Zaumseil:
Atomic structure and lattice dynamics of strain-compensated $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ layers
7th ICSMM-7, Banff, Canada 1994
77. K. Schmalz, I.N. Yassievich, H. Rucker, H.J. Osten, and H.P. Zeindl:
Effective barriers induced by confined carriers in space charge spectroscopy of single quantum wells
Intern. Symp. Nanostructures, St. Petersburg, Russia Juni 1994
78. H. Rucker, M. Methfessel, E. Bugiel, and H.J. Osten:
Strain-stabilized Si-C alloy layers containing 20% carbon embedded pseudomorphically in Si
22nd Internat. Conf. on the Physics of Semiconductors, Vancouver, Canada, August 1994.

-
- B. Dietrich, H.J. Osten, H. Rücker, M. Methfessel, and P. Zaumseil:
Lattice distortion in a $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ alloy
15. Europ. Cryst. Meeting, Dresden Aug. 1994
79. H.J. Osten, B. Dietrich, H. Rücker, and M. Methfessel:
Lattice distortion in strain-compensated epitaxial $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$ layers on Si(001) grown with MBE
VIII International Conference on MBE, August 1994, Osaka, Japan
80. G. Lippert and H.J. Osten:
Soft cleaning by in vacuo ultraviolet radiation before MBE
UCPSS2, Belgien 1994
81. H. Rücker, M. Methfessel, E. Bugiel, and H.J. Osten:
Strain-stabilized highly concentrated pseudomorphic $\text{Si}_{1-y}\text{C}_y$ layers in Si
GORDON conference *Point Defects, Line Defects, and Interfaces in Semiconductors*,
New Hampshire 1994
82. B. Dietrich, H.J. Osten, H. Rücker, M. Methfessel, and P. Zaumseil:
Raman scattering and atomic structure of strain-compensated $\text{Si}_{1-x-y}\text{Ge}_x\text{C}_y$
XIVth Int. Conf. on Raman Spectr., Hongkong 1994
83. G. Lippert, H.J. Osten, D. Krüger, P. Garworzewski und K. Eberl:
 n^+ -Dotierung mit einer speziellen Phosphorquelle in der Si-MBE
MBE-Workshop Templin, Oct. 1994
84. J. Klatt, H.J. Osten, and P. Zaumseil:
Strain relaxation during surfactant-mediated epitaxial growth of thin Germanium layers on silicon and the formation of a new invers strained germanium cell
EURO-MBE 1993 (Italien)
85. E. Bugiel, P. Zaumseil, B. Dietrich, and H.J. Osten:
Relaxation phenomena of strained $\text{Si}_{1-x}\text{Ge}_x$ layers on planar and patterned Si substrates
MSM VIII Oxford 1993
86. E. Bugiel, P. Zaumseil, B. Dietrich, and H.J. Osten:
Relaxation phenomena in strained $\text{Si}_{1-x}\text{Ge}_x$ layers on planar and differently patterned Si substrates
GADEST 1993
87. B. Dietrich, E. Bugiel, H.J. Osten, and P. Zaumseil:
Micro-Raman investigations of elastic and plastic strain relief in $\text{Si}_{1-x}\text{Ge}_x$ heterostructures
GADEST 1993
88. H.P. Zeindl, G. Lippert, J. Drews, R. Kurps, and H.J. Osten:
Reduction of interfacial carbon and boron contamination as sources for degradation of epitaxial SiGe layers grown by MBE
GADEST 1993
89. K. Schmalz, H. Rücker, H.G. Grimmeiss, B. Dietrich, H. Frankenfeld, W. Mehr, H.J. Osten, and P. Schley:
Characterization of MBE grown Si/Si_{1-x}Ge_x/Si structures using n^+ p-diodes
GADEST 1993
90. H.J. Osten, E. Bugiel and J. Klatt:
Kinetic suppression of islanding in Stranski-Krastanov growth based on surfactants: Ge on Si(100):Sb
ICTF 9, Wien, Sept. 1993
91. K. Schmalz, H. Rückert, I.N. Yassievich, H.G. Grimmeiss, W. Mehr, H. Frankenfeld, H.J. Osten, P. Schley, and I. Babanskaja:
Characterization of the valance band offsets in p-Si/SiGe/Si by space charge spectroscopy
MRS Fall Meeting, Boston 1993

-
92. H.J. Osten:
Verspannte SiGe-Schichten auf vorstrukturierten Substraten: gleichzeitiges epitaktisches Wachstum auf (100) und (111) Flächen.
MBE-Workshop Darmstadt 1993
93. G. Lippert und H.J. Osten:
In situ Reinigung von Si-Substraten vor der MBE-Beschichtung
MBE-Workshop Darmstadt 1993
94. H.P. Zeindl und H.J. Osten
B-Delta-Schichten in Si und SiGe
MBE-Workshop Darmstadt 1993
95. K. Schmalz, H. Rückert, I.N. Yassievich, H.G. Grimmeiss, B. Dietrich, H. Frankenfeld, W. Mehr, H.J. Osten, and P. Schley:
Characterization of the valence band offset in p-Si/Si_{1-x}Ge_x/Si by space charge spectroscopy
MSS6, Gramisch-Patenkirchen, Sept. 1993
96. D. Krüger, G. Lippert, R. Kurps, E. Bugiel, and H.J. Osten:
Boron segregation in Si- and Si_{1-x}Ge_x-layers during MBE growth
ICESI-4, Jülich, Juni 1993
97. G. Lippert and H.J. Osten:
In situ cleaning of Si surfaces before MBE deposition
1st Internat. Symposium *Ultra clean processing of Silicon Surfaces* (UCPSS), Sept. 92, Leuven (Belgien)
98. H.J. Osten, J. Klatt, G. Lippert, and E. Bugiel:
Surfactant-mediated growth of germanium on Si(100) by MBE and SPE
VII. MBE world conference, August 1992, Schwäbisch-Gmünd
99. G. Lippert and H.J. Osten:
In situ cleaning of Si surfaces by UV/Ozone
VII. MBE world conference, August 1992, Schwäbisch-Gmünd
100. H.J. Osten, J. Klatt, G. Lippert, E. Bugiel, and B. Dietrich:
The influence of surfactants on the growth of Ge layers on silicon surfaces by MBE
MRS Spring Meeting (Symp. F) May 1992, San Francisco
101. B. Dietrich, E. Bugiel, J. Klatt, G. Lippert, T. Morgenstern, H.J. Osten, and P. Zaumseil:
Measurement of stress by Raman line shift in MBE- and CVD-grown Si_{1-x}Ge_x epilayers
XIII Internat. Conference on Raman Spectroscopy, Würzburg 1992
102. H.J. Osten:
Beeinflussung der Wachstumsmoden von metastabilen Si_{1-x}Ge_x- und Ge-Schichten auf Si(100)-Substraten durch den Einsatz von Surfactanten
Deutscher MBE-Workshop in Garching, March 1992
103. H.J. Osten, J. Klatt, and G. Lippert:
Germanium and antimony epitaxy with large lattice misfit
GADEST 1991
104. H.J. Osten, F. Richter, C.D. Harms, J. Klatt, G. Lippert und F. Wolf:
Alternative Materialien für Leitbahn- und Kontaktsysteme höherer Technologieniveaus
VDI-Symposiums "Wer macht was", Berlin 1990

2. University of Illinois at Chicago and Cambridge University

1. H.J. Osten:
Der Einfluß von Molekülschwingungen und -rotation auf verschiedene NMR-Parameter
Mitteilungsblatt der Chemischen Gesellschaft der DDR, **35** (1988) 57.
2. H.J. Osten:
Rovibrationseinflüsse auf molekulare elektronische Eigenschaften
eingeladener Plenarvortrag auf der Chemiedozententagung
Magdeburg 1987
3. C.J. Jameson, A.K. Jameson, N.C. Smith and H.J. Osten:
 ^{13}C and ^1H spin relaxation in CH_4 in the gas phase
J. Chem. Phys., **86** (1987) 1102.
4. H.J. Osten and C.J. Jameson:
Quadrupolar spin relaxation due to electric field gradients induced by vibrations and collisions
Mol. Phys. **57** (1986) 553.
5. C.J. Jameson and H.J. Osten:
Isotope effects on spin-spin coupling constants
J. Am. Chem. Soc. **108** (1986) 2497.
6. C.J. Jameson and H.J. Osten:
Theoretical aspects of isotope effects on nuclear shielding (Review)
Annual reports on NMR spectroscopy, Vol. 17 (1986) 1-75
7. H.J. Osten:
Correlation between intramolecular dynamics and ^{19}F nuclear magnetic shielding for a series of gaseous halomethanes
Intern. Symposium "Macroscopic Properties of Gases and Intermolecular Interactions",
Rostock 1985, pp. 14
8. H.J. Osten and C.J. Jameson:
Rovibrational effects on nuclear shielding of apex nuclei in bent molecules
J. Chem. Phys. **82** (1985) 4595.
9. C.J. Jameson and H.J. Osten:
Systematic trends in the variation of ^{19}F nuclear magnetic shielding with bond extension in halomethanes
Mol. Phys. **55** (1985) 383.
10. C.J. Jameson and H.J. Osten:
Application of the reduced isotope shift to general estimation of one-bond Isotope shift in NMR
J. Am. Chem. Soc. **107** (1985) 4158.
11. H.J. Osten:
The isotope shift - a molecular dynamic effect on nuclear shielding
Materialien der zweiten Tagung "Moderne Methoden der Hochfrequenzspektroskopie",
Reinhardtbrunn 1985, pp. 33.
12. C.J. Jameson and H.J. Osten:
The mean bond displacements and the derivatives of ^{19}F shielding in $\text{CF}_2=\text{CFX}$ and $\text{CF}_2=\text{CH}_2$
J. Chem. Phys. **83** (1985) 5425.
13. H.J. Osten, C.J. Jameson, and N.C. Craig:
Deuterium-induced ^{19}F isotope shifts in fluoroethenes
J. Chem. Phys. **83** (1985) 5434

14. C.J. Jameson and H.J. Osten:
Rovibrational averaging of molecular magnetic properties of CH₃F, CH₂F₂, and CHF₃
Mol. Phys. **56** (1985) 1083.
15. C.J. Jameson and H.J. Osten:
The effect of anharmonic vibrations and centrifugal distortion on nuclear shielding in linear triatomic molecules: NNO and CO₂
J. Chem. Phys. **81** (1984) 2556.
16. H.J. Osten and C.J. Jameson:
The dependence of the ¹³C and the ¹H nuclear magnetic shielding on bond extension in methane
J. Chem. Phys. **81** (1984) 4288.
17. C.J. Jameson and H.J. Osten:
The additivity of NMR isotope shifts
J. Chem. Phys. **81** (1984) 4293.
18. C.J. Jameson and H.J. Osten:
The NMR isotope shift in polyatomic molecules. Estimation of the dynamic factors
J. Chem. Phys. **81** (1984) 4300.
Erratum: J. Chem. Phys. **83** (1985) 915.
19. C.J. Jameson and H.J. Osten:
The mean bond displacements in O=CF₂ and their effect on ¹⁹F nuclear magnetic shielding
J. Chem. Phys. **81** (1984) 4915.

3. Institute for Physical Chemistry (ZIPC) Berlin

1. R. Radeaglia und H.J. Osten:
Die theoretische Beschreibung von Aufspaltungen zweiter Ordnung in ¹H-CW-off-resonance entkoppelten ¹³C-NMR-Spektren
Z. phys. Chemie, Leipzig **261** (1980) 617.
2. H.J. Osten and R. Radeaglia:
Theoretical description of intensity asymmetries within the multiplets of off-resonance decoupled NMR spectra of simple spin systems
Materialien der Herbstschule "Moderne Methoden der Hochfrequenzspektroskopie",
Reinhardtsbrunn 1981, pp. 243.
3. H.J. Osten and R. Radeaglia:
Spin dynamics of an AX system in FT-NMR experiment by the example of the ¹H -cw-off-resonance decoupled ¹³C NMR spectrum of chloroform
J. Magn. Reson. **49** (1982) 8.
4. H.J. Osten, R. Radeaglia und A. Illigmann:
ORAND - eine neue NMR-Doppelresonanztechnik zur Gewinnung von Intensitäts-symmetrischen Multipletts bei off-resonance-Experimenten
Experiment. Techn. Physik **31** (1983) 75.
5. H.J. Osten and R. Radeaglia:
Abnormal intensity effects in heteronuclear NMR double resonance experiments of A_nX spin systems. Theoretical description and experimental possibilities of its suppression
J. Magn. Reson. **51** (1983) 213.
6. H.J. Osten und R. Radeaglia:
Die theoretische Beschreibung der NMR-Spektren von off- resonance-entkoppelten ABX-Spinsystemen. Näherungsverfahren - Möglichkeiten und Anwendungsgrenzen
Z. phys. Chemie, Leipzig **264** (1983) 353.

7. H.J. Osten und R. Radeaglia:
Über die Möglichkeiten der Gewinnung zusätzlicher Strukturinformationen aus den Aufspaltungen höherer Ordnung in ^1H -CW-off-resonance entkoppelten ^{13}C -NMR-Spektren von CH_2 -Gruppen mit nichtäquivalenten Protonen
Z. phys. Chemie, Leipzig **264** (1983) 827.
8. L. Mögel, M. Schulz, R. Radeaglia und H.J. Osten:
 ^{13}C -NMR-Untersuchungen der interannularen Konjugation in substituierten Pyrazolen
J. prakt. Chemie **326** (1984) 54.

4. Student in Poland

1. Z.Pajak, J. Kapturczak, and H. J.Osten:
Untersuchungen des zweiten Moments der NMR-Linien in festen Fluoroperowskiten des Types $\text{NH}_4\text{Co}_x\text{Mg}_{1-x}\text{F}_3$ (in Polnisch)
Materialien des XII. Gesamtpolnischen NMR-Symposiums, Krakow 1979, 64
2. Z. Pajak, J. Kapturczak, and H.J. Osten:
PMR line broadening in paramagnetic fluoroperovskite structures of $\text{NH}_4\text{Co}_x\text{Mg}_{1-x}\text{F}_3$
Bull. Magn. Reson. **2** (1981) 131

5. Patents

1. D. Krüger, A. Goryachko, R. Kurps, J.P. Liu, and H.J. Osten:
Transistor, method for producing an integrated circuit and method for producing a metal silicide layer
27.03. 2007 (US7.196.382.B2))
2. D. Krüger, A. Goryachko, R. Kurps, J.P. Liu und H.J. Osten:
Transistor, Verfahren zur Herstellung einer inetegrierten Schaltung und Verfahrnung zur Herstellung einer Metallsilizidschicht
26. 05. 2001 (DE 10127234 A1)
3. D. Krüger, A. Goryachko, R. Kurps, J.P. Liu, and H.J. Osten:
Transistor, method for producing an integrated circuit and method for producing a metal silicide layer
26. 05. 2001 (WO 20020097895 A2)
4. D. Krüger, A. Goryachko, R. Kurps, J.P. Liu, and H.J. Osten:
Transistor, method for producing an integrated circuit and method for producing a metal silicide layer
26. 05. 2001 (WO 20020097895 A3)
5. D. Krüger, A. Goryachko, R. Kurps, J.P. Liu, and H.J. Osten:
Transistor, method for producing an integrated circuit and method for producing a metal silicide layer
26.05. 2001 (EP 00001396028A2)
6. B. Heinemann, D, Knoll, K.-E. Ehwald, H. Rücker, D. Krüger, B. Tillack, H.J. Osten, W. Mehr, W. Winkler, and A. Ourmazd:
Bipolar transistor
30.11.2001 (WO 2003046947A3)
7. B. Heinemann, D, Knoll, K.-E. Ehwald, H. Rücker, D. Krüger, B. Tillack, H.J. Osten, W. Mehr, W. Winkler, and A. Ourmazd
Bipolar Transistor 30.11.2001 (WO 2003046947A2)

8. G. Lippert, B. Heinemann, H.J. Osten, H. Rücker und P. Wegner:
Tunnelodiode und Verfahren zu ihrer Herstellung
29. 01. 2000 (DE 10003951 A1)
9. H.J. Osten:
Schichtstapel für einen pnp-Heterobipolartransistor
04. 02. 2000 (DE 10005405 A1)
10. H.J. Osten:
Elektronisches Bauelement und Herstellungsverfahren für ein elektronisches Bauelement
03. 08. 2000 (DE 10039327 A1)
11. H.J. Osten:
Electronic component and method for producing an electronic component
03. 08. 2000 (WO 2002013275 A1)
12. H.J. Osten:
Electronic component and method for producing an electronic component
03. 08. 2000 (EP000001410442A1)
13. H.J. Osten:
Electronic component and method for producing an electronic component
03. 08. 2000 (US020030193061A1)
14. A. F. Holländer, D. Knoll, B. Kuck, A. Fischer, H. Richter, B. Tillack und H.J. Osten:
Hochtemperaturstabile Halbleitersubstratscheibe großen Durchmessers und Verfahren zu ihrer Herstellung
12. 10. 1998 (DE 19848298 A1)
15. A. Fischer, F. Holländer, D. Knoll, B. Kuck, H.J. Osten, H. Richter, and B. Tillack:
Large-diameter high temperatur stable semiconductor substrate wafer
12. 10. 1998 (WO 2000022205)
16. G. Lippert, B. Heinemann und H.J. Osten:
Silizium-Germanium Heterobipolartransistor
06. 12. 1997 (DE 19755979 A1)
17. G. Lippert, A. Ourmazd und H.J. Osten:
MOSFET und Verfahren zur Herstellen der Schichten eines derartigen Transistors
09. 12. 1996 (DE 19652417 A1)
18. G. Lippert, A. Ourmazd, and H.J. Osten:
MOS transistor and production of layers for that type of transistor
09. 12. 1996 (WO 1998026456)
19. G. Lippert, A. Ourmazd, and H.J. Osten:
MOS transistor and production of layers for that type of transistor
09. 12. 1996 (EP 0000946987A1)
20. G. Lippert, A. Ourmazd, and H.J. Osten:
MOSFET and methods of its fabrication
09. 12. 1996 (US 20020125479 A1)
21. G. Lippert, H.J. Osten und B. Heinemann:
Silizium-Germanium-Heterobipolartransistor und Vefahren zur Herstellung der epitaktischen Einzelschichten eines derartigen Transistors
09. 12. 1996 (DE 19652423 A1)
22. G. Lippert, H.J. Osten, and B. Heinemann:
Silicon germanium hetero bipolar transistor
09. 12. 1996 (EP 0000954880A1)

-
23. G. Lippert, H.J. Osten, and B. Heinemann:
Silicon germanium hetero bipolar transistor
09. 12. 1996 (US 20030071278A1)
 24. G. Lippert, H.J. Osten, and B. Heinemann:
Silicon germanium hetero bipolar transistor
09. 12. 1996 (US 00006750484B2)
 25. G. Lippert, H.J. Osten, and B. Heinemann:
Silicon germanium hetero bipolar transistor having a germanium concentration profile in the base layer
09. 12. 1996 (US 20030071277A1)
 26. G. Lippert, H.J. Osten, and B. Heinemann:
Silicon-germanium heterojunction transistor and methods for making its various epitaxial layers
09. 12. 1996 (WO 1998026457)
 27. G. Lippert, H.J. Osten, and B. Heinemann:
Silicon-germanium hetero bipolar transistor with shaped implantation layer between emitter and emitter contact area
09. 12. 1996 (US 20030071281A1)
 28. G. Lippert, H.J. Osten, H. Thieme und J. Klatt:
Vorrichtung zur Feinstreinigung scheibenförmiger Objekte
11. 1992 (DE 4238586 A1)
 29. H.J. Osten, G. Lippert und J. Klatt:
Verfahren zur Ausbildung einer hochleitfähigen Aluminiumschicht
31. 10. 1991 (DE 4135903 A1)