

## PUBLICATIONS LIST OF KONSTANTINOS ZEKENTES

### **Publications in peer-reviewed journals included in ISI/SCOPUS Citation Indexes**

- 1) "Weak Localization of 2D electron gas in GaAs-GaAlAs heterostructures under hydrostatic pressure"  
K.Zekentes, S.Ravanomanjato, R.Piotrkowski, E.Litwin-Staszewska, J.L.Robert  
Surf. Science 228, 1990, pp. 449-452
- 2) "Pressure induced  $\Gamma$ - $\Gamma$  to  $\Gamma$ -X tunneling crossover in GaAs-GaAlAs heterostructures"  
K.Zekentes, J.M.Mercy, J.L.Robert, Z.Hatzopoulos, A.Christou  
Superlattices and Microstructures, Vol. 10, No 1, 1991, pp. 73
- 3) "Electrical transport study of pseudomorphic heterostructures InGaAs/InAlAs on Si and InP substrates".  
K.Zekentes, A.Georgakilas, M.Lagadas, K.Michelakis, A.Christou, J.M.Mercy, L.Konczewicz, J.L.Robert  
Sensors and Actuators, Vol. 33, No 1-2, 1992, pp. 67-70
- 4) "Electric field dependence of interband transitions in  $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}/\text{In}_{0.52}\text{Al}_{0.48}\text{As}$  single quantum wells by room temperature electrotransmittance"  
A. Dimoulas, K.P. Giapis, J. Leng, G. Halkias, K. Zekentes, A. Christou.  
J. Appl. Phys. 72 (5), 1 Sept 1992, pp. 1912-1917
- 5) "Optical properties of InGaAs films embedded in plasma etched InP wells"  
A. Georgakilas, A. Christou, P. Lefebvre, J. Allegre, K. Zekentes, G. Halkias  
Appl. Phys. Lett. 61(7), August 1992, pp. 798-800
- 6) "Assymmetric Fabry-Perot p-i-n multiple quantum well optical modulators grown on GaAs and Silicon substrates"  
A. Dimoulas, K. Zekentes, E. Aperathitis, A. Georgakilas, J. Leng, P. Panayotatos, A. Christou.  
Superlattices and Microstructures, Vol. 12, No 2, 1992, 145
- 7) "Temperature dependence of the photoreflectance of strained and lattice matched InGaAs/InAlAs single quantum wells"  
Y. Baltagi, S. Moneger, A. Tabata, T. Benyattou, C. Bru, A. Georgakilas, K. Zekentes, G. Halkias  
Appl. Surf. Science, 63, 1993, pp. 172-176
- 8) "Characterization of lattice-matched and strained GaInAs/AlInAs HEMT structures by photoluminescence spectroscopy"  
A. Tabata, T. Benyattou, G. Guillot, A. Georgakilas, K. Zekentes, G. Halkias  
Appl. Surf. Science, 63, 1993, pp. 182
- 9) "Magneto-luminescence study of Be  $\delta$ -doped GaAs-GaAlAs quantum wells under hydrostatic pressure"  
S. G. Lyapin, A. Raymond, P. Vicente, M. Kubisa, J.L. Sauvajol, K. Zekentes, Z. Hatzopoulos  
Jpn. J. Appl. Phys. Vol 32, 1993, suppl. 32-1, pp. 132-134
- 10) "Frequency resolved admittance measurements on InGaAs/InAlAs single quantum wells applied to determine the conduction band offset and the capture time constant"  
J.M. Lopez-Villegas, P. Roura, J. Bosch, J.R. Morante, A. Georgakilas, K. Zekentes  
J. Electrochem. Soc., Vol. 140, No. 5, May 1993, pp. 1492-1495
- 11) "A comprehensive optimization of InAlAs Molecular Beam Epitaxy for InGaAs/InAlAs HEMT Technology"  
A. Georgakilas, G. Halkias, A. Christou, N. Kornilios, C. Papavassiliou, K. Zekentes, G. Konstantinidis, F. Peiro,  
A. Cornet, S. Ababou, A. Tabata, G. Guillot  
J. Electrochem. Soc., Vol. 140, No. 5, May 1993, pp. 1503-1509
- 12) "Material problems for the development of InGaAs/InAlAs HEMT's technology"  
K. Zekentes, G. Halkias, A. Dimoulas, N. Kornilios, A. Tabata, T. Benyattou, G. Guillot, J.R. Morante, F. Peiro,  
A. Cornet, A. Georgakilas, A. Christou  
Mat. Sci. Eng. B 20, 1993, pp. 21-25

- 13) "Interface defects and inhomogeneities induced by alloy clustering in InAlAs buffer layers grown on InP"  
F. Peiro, A. Cornet, J.R. Morante, A. Georgakilas, K. Zekentes, G. Halkias  
Appl. Surf. Science, 65/66, 1993, pp. 447-454
- 14) "Photo-induced current transient spectroscopy of  $\text{In}_{0.52}\text{Al}_{0.48}\text{As}$  semi-insulating layers grown on InP by molecular beam epitaxy"  
A. Kalboussi, G. Marrakchi, A. Tabata, G. Guillot, G. Halkias, K. Zekentes, A. Georgakilas, A. Christou  
Mat. Sci. Eng. B 22, 1993, pp. 93-96
- 15) "Photoreflectance studies of lattice-matched and strained InGaAs/InAlAs single quantum wells"  
S. Moneger, Y. Baltagi, T. Benyattou, A. Tabata, B. Ragot, G. Guillot, A. Georgakilas, K. Zekentes, G. Halkias  
J. Appl. Phys. 74(2), July 1993, pp. 1473-143
- 16) "Degenerate electron gas effects in the modulation spectroscopy of pseudomorphic  $\text{Al}_{0.32}\text{Ga}_{0.68}\text{As}/\text{In}_{0.15}\text{Ga}_{0.85}\text{As}/\text{GaAs}$  high electron mobility transistor structures"  
A. Dimoulas, K. Zekentes, M. Androulidaki, N. Kornelios, C. Michelakis, Z. Hatzopoulos  
Appl. Phys. Lett. 63(10), September 1993, pp. 1417-1419
- 17) "Room-temperature photoreflectance as an efficient tool for study of the crystalline quality of InAlAs layers grown on InP substrates"  
S. Moneger, A. Tabata, C. Bru, G. Guillot, A. Georgakilas, K. Zekentes, G. Halkias  
Appl. Phys. Lett. 63(12), September 1993, pp. 1654-1656 and in Mat. Sci. and Eng. B 21, 1993, pp. 177-180
- 18) "Fractional dimensionality of weakly localized electrons in GaAs- $\text{Ga}_{0.7}\text{Al}_{0.3}\text{As}$  heterostructures"  
S. Ravanomanjato, K.A. Zekentes, J.L. Robert, W. Zawadzki  
Europhysics Lett. 24(7), 1993, pp. 589-594
- 19) "Oscillator strength of the  $E_1\text{HH}_1$  excitonic transition as a function of magnetic field in modulation doped GaAlAs/GaAs quantum well"  
P. Vicente, A.V. Kavokin, A. Raymond, S. G. Lyapin, K. Zekentes, D. Dur, W. Knap  
Jour. de Physique IV C5, Vol. 3, (Proc. Int. Conf. Optics Excitons Confined Systems, Sept. 1993, Montpellier, France) 1993, pp. 323-326.
- 20) "High sensitivity Hall sensors with low thermal drift using AlGaAs/InGaAs/GaAs heterostructures"  
V. Mosser, S. Contreras, S. Aboulhouda, Ph. Lorenzini, F. Kobbi, J.L. Robert, K. Zekentes  
Sensors and Actuators A43, 1994, pp.135-140
- 21) "Electrical transport Quantum effects in the  $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}/\text{In}_{0.52}\text{Al}_{0.48}\text{As}$  heterostructures on silicon"  
A. Georgakilas, A.Christou, K.Zekentes, J.M.Mercy, L.K.Konczewicz, A.Vila, A.Cornet  
J. Appl. Phys. 76 (3), Aug. 1994, pp.1948-1950
- 22) "Determination of the basic parameters of pseudomorphic GaInAs quantum wells by means of simultaneous transport and optical investigations"  
E. Litwin-Staszewska, F. Kobbi, M. Kamal-Saadi, D. Dur, S. Skierbiszewski, H. Sibari, K. Zekentes, V. Mosser, A. Raymond, W. Knap, J.L. Robert  
Solid St. Electronics Vol. 37(4-6), 1994, pp. 665-667
- 23) "TEM analysis of InGaAs/InAlAs epitaxial layers grown over InP patterned substrates"  
F. Peiro, A. Cornet, J.R. Morante, K. Zekentes, A. Georgakilas  
Materials Letters 21, Dec.1994, pp. 371-375
- 24) "Carbonization of Si-surface by solid-source MBE"  
K.Zekentes, R. Callec, K.Tsagaraki, B.Sagnes, G.Arnaud, J.Pascual, J.Camassel  
Mat. Sci. Eng. B29, 1995, pp. 138-141
- 25) "Electron traps in  $\beta\text{-SiC}$  grown by chemical vapor deposition on silicon (100) substrates"  
K.Zekentes, M.Kayambaki, G.Konstantinidis  
Appl. Phys. Lett 66 (22), May 1995, pp. 3015-3017
- 26) "Early stages of growth of  $\beta\text{-SiC}$  on Si by MBE"  
K. Zekentes, V. Papaioannou, B. Pecz and J. Stoemenos  
J. Cryst. Growth, Vol.157, December 1995, pp. 392-399

- 27) "Weak antilocalization and spin precession in quantum wells"  
W.Knap, C.Skierbiszewski, A. Zduniak, E.Litwin-Staszewska, D. Bertho, F.Kobbi, J.L.Robert, G.E. Pikus, F.G. Pikus, Y.B.Lyanda-Geller, S.V.Iordanskii, V.Mosser, K.Zekentes  
Phys. Rev. B, Vol. 53, Feb. 1996, p. 3912 and in, Acta Physica Polonica A, Vol. 87, 1995, pp. 427-432
- 28) "Gas source molecular beam epitaxy of  $\beta$ -SiC on Si substrates"  
K. Zekentes, N. Becourt, M. Androulidaki, K. Tsagaraki, J. Stoemenos, J.M. Bluet, J. Camassel, J. Pascual  
Appl. Surf. Sci. 102, 1996, p. 22
- 29) "Diffusion of gold in 3C-SiC epitaxially grown on Si: Structure characterisation"  
N. Kornilios, G. Constantinidis, K.Zekentes, J. Stoemenos  
Mat. Sci. and Eng. B J., B46, 1997, p. 186
- 30) "High temperature ohmic contacts to 3C-SiC grown on Si substrates by chemical vapor deposition"  
G. Constantinidis, N. Kornilios, K.Zekentes, L. Di Cioccio  
Mat. Sci. Eng. B J., B46, 1997, p. 176
- 31) "Topology of twin interface junctions in epitaxial  $\beta$ -SiC"  
Ph. Komninou, G. P. Dimitrakopoulos, K. Zekentes, V. Papaioannou, B. Pecz, J. Stoemenos, Th. Karakostas  
Diam. & Rel. Mat., Vol. 6(10), (1997), p. 1362
- 32) "IR characterization of carbonization of Si surfaces by Gas source molecular beam epitaxy"  
M. Ben el Mekki, J. Pascual, M. Androulidaki, K. Zekentes, J. Camassel, J. Stoemenos  
Diam. & Rel. Mat., Vol. 6, (1997), p.1772
- 33) "Low temperature SiC growth by Metalorganic LPCVD on MBE carbonized Si(100) substrates"  
E. Hurtos, J. Rodriguez-Viejo, J. Bassas, M. T. Clavaguera-Mora, K. Zekentes  
Mat. Sci. Eng. B J. 61-62 (1999), (Proc. of ECSCRM'1998, Montpellier, France), pp. 549-552
- 34) "Study of annealing conditions on the formation of ohmic contacts on p+ 4H-SiC layers grown by CVD and LPE"  
K. V. Vassilevski, G. Constantinidis, N. Papanicolaou, N. Martin and K. Zekentes  
Mat. Sci. Eng. B 61-62 (1999), (Proc. of ECSCRM'1998, Montpellier, France), pp. 296-300
- 35) "Surfactant-mediated MBE growth of SiC on Si (100) substrates"  
K. Zekentes and K. Tsagaraki  
Mat. Sci. Eng. B 61-62 (1999), (Proc. of ECSCRM'1998, Montpellier, France), pp. 559-562
- 36) "Nucleation behavior during the first stages of SiC growth on different substrates"  
E. Hurtos, J. Rodriguez-Viejo, M. T. Clavaguera-Mora and K. Zekentes  
J. Phys. IV France, Vol. 9 P8, (Proc. of EUROCV D 12), 1999, pp. 1069-1074.
- 37) "Electrical characteristics and structural properties of ohmic contacts to p-type 4H-SiC epitaxial layers"  
K. V. Vassilevski, K. Zekentes, S. Rendakova, I. Nikitina, A. Babanin, A. Andreev  
Fizika I Technika Poluprovodnikov-FTP. V33, No 11 (in Russian) and in Semiconductors, V 33, Issue 11, pp. 1206-1211, (1999).
- 38) "Fabrication and electrical characterization of 4H-SiC p<sup>+</sup>-n-n<sup>+</sup> diodes with low differential resistance"  
K. Vassilevski, K. Zekentes, G. Constantinidis, A. Strel'chuk.  
Sol. St. Electron. 44 (2000), pp. 1173-1177
- 39) "Room-temperature GaAs/AlGaAs multiple-quantum-well optical modulators for the 3-5 $\mu$ m atmospheric window"  
H. Alause, W. Knap, J. L. Robert, R. Planel, V. Thierry-Mieg, F. H. Julien, K. Zekentes, V. Mosser  
Semicond. Sci. Technol. 15 (2000), pp. 724-727
- 40) "Crystal quality evaluation by electrochemical preferential etching of p-type SiC crystals".  
M. Kayambaki, K. Tsagaraki, V. Cimalla, K. Zekentes, and R. Yakimova.  
J. Electrochem. Soc 147 (7), (2000), pp. 2744-2748
- 41) "The temperature dependence of the transition from two-dimensional to three-dimensional growth of Ge on (001)Si studied by RHEED"

V. Cimalla, K. Zekentes.

Appl. Phys. Lett., Vol.77(10), (2000), pp. 1452-1454

- 42) "Experimental determination of electron drift velocity in 4H-SiC p<sup>+</sup>-n-n<sup>+</sup> avalanche diodes"  
K. Vassilevski, K. Zekentes, A. Zorenko, L. P. Romanov.  
IEEE El. Dev. Lett. Vol. 21(10), (2000), pp. 485-487
- 43) "Experimental observation of microwave oscillations produced by pulsed silicon carbide IMPATT diode"  
K. Vassilevski, A. Zorenko, K. Zekentes  
IEE Electronics Lett. Vol. 37, no 7, (2001), pp. 467-467
- 44) "Improved Al/Si ohmic contacts to p-type 4H-SiC"  
R. Kakanakov, L. Kassamakova, K. Zekentes, N. Kuznetsov.  
Mat. Sci. Eng. B, Vol 80/1-3, (2001), (Proc. EXMATEC 2000), pp 374-377
- 45) "Phase formation at rapid thermal annealing of Al/Ti/Ni ohmic contacts on 4H-SiC"  
K. Vassilevski, K. Zekentes, G. Constantinidis, I. Nikitina, A. Zorenko,  
Mat. Sci. Eng. B, Vol 80/1-3, (2001), (Proc. EXMATEC 2000), pp 370-373
- 46) "Surface roughness studies on 4H-SiC layers grown by liquid phase epitaxy"  
N. Kuznetsov, K. Tsagaraki, D. Bauman, A. Morozov, I. Nikitina, V. Ivantsov, K. Zekentes.  
Mat. Sci. Eng. B, Vol 80/1-3, (2001), (Proc. EXMATEC 2000), pp 345-347
- 47) "Control of morphological transitions during heteroepitaxial island growth by reflection high energy electron diffraction"  
V. Cimalla, K. Zekentes, N. Vouroutzis  
Mat. Sci. Eng. B, Vol.88, (2002), pp. 186-190
- 48) "High temperature characteristics of Ti/Al and Cr/Al ohmic contacts to n-type GaN"  
N. Papanicolaou, K. Zekentes  
Sol. St. Electron., Vol. 46 (11), (2002), pp. 1975-1981
- 49) "Study of the reactive ion etching of 6H-SiC and 4H-SiC in SF<sub>6</sub>/Ar plasmas by optical emission spectroscopy and laser interferometry"  
N. Camara, K. Zekentes  
Sol. St. Electron., Vol. 46 (11), (2002), pp. 1959-1963 and,  
"Use of Laser Interferometry and Optical Emission Spectroscopy for Monitoring the Reactive Ion Etching of 6H - and 4H-SiC"  
N. Camara, G. Constantinidis and K. Zekentes  
Mat. Sci. For. 433-436 (2003) (Proc. ECSCRM2002, September 2002, Linköping, Sweden), pp. 693-696
- 50) "Linear alignment of SiC dots on silicon substrates"  
V. Cimalla, J. Pezoldt, Th. Stauden, Ch. Förster, and O. Ambacher, A. A. Schmidt, K. Zekentes  
J. Vac. Sci. Technol. B. Letters, B22 (2004), L20-L23 and in,  
Phys. Stat. Sol. (c) Vol. 1, Issue 2 (Feb. 2004), pp. 337-340
- 51) "Self organized SiC nanostructures on silicon"  
V. Cimalla, A. A. Schmidt, C. Förster, K. Zekentes, O. Ambacher, J. Pezoldt  
Superlattices and Microstructures, Vol 36/1-3(Proc. E-MRS'04, May 2004, Strasbourg, France) 2004, pp 345-351.
- 52) "Forward-bias degradation in 4H-SiC p<sup>+</sup>nn<sup>+</sup> diodes: Influence of the mesa etching"  
N. Camara, A. Thuair, E. Bano, K. Zekentes  
Phys. St. Sol. (a) 202 (4) (2005) (Proc. EXMATEC'04, June 2004, Montpellier, France), pp. 660-664 and in,  
Mat. Sci. Forum. 483-485 (2005) (Proc. of ECSCRM'04, Sept. 2004, Bologne, Italy), pp. 773-776
- 53) "Microwave switches, based on 4H-SiC p-i-n diodes"  
Bludov A.V., Boltovets N.S., Vassilevskii K.V., Zorenko A.V., Zekentes K., Krivutsa V.A., Kritskaya T.V.,  
Lebedev A.A.  
Techn. Phys. Letters, Vol. 30, No 2, (2004), p.123-125
- 54) "Silicon carbide TUNNETT diodes"  
V.V.Buniatyan, V.M.Aroutiounian, K.Zekentes, N.Camara, P.Soukiassian

Sol. St. Electron. Vol. 48 (2004), pp. 1569 –1577

- 55) "Microwave p-i-n diodes and switches based on 4H-SiC"  
N. Camara, K. Zekentes, L. P. Romanov, A. V. Kirillov, M. S. Boltovets, K. V. Vassilevski and G. Haddad  
IEEE El. Dev. Lett. Vol. 27(2), (2006), pp. 108-110
- 56) "Microwave characteristics of hetero-junction impatt diodes based on SiC"  
V.V. Buniatyan, V.M. Aroutiounian, P.G. Soukiassian, K. Zekentes and V. V. Buniatyan  
J. Phys. IV France **132** (2006) (Proc of ICFSI-10, July 2005, Aix-en Provence, France) 355–357
- 57) "Experimental investigation of noise in 4H-SiC p(+)-n-n(+) junctions"  
N. Arpatzianis, D. H. Tassis, C. A. Dimitriadis, K. Zekentes and N. Camara\*  
Semicond. Sci. Tech. 21(5), (2006), pp. 591-593
- 58) "Electrical and low frequency noise properties of 4H-SiC p(+)-n-n(+) junction diodes"  
Arpatzianis N, Tsormpatzoglou A, Dimitriadis C., Zekentes K, Camara N., Godlewski M.  
Phys. St. Sol. A Vol. 203(10) (2006) pp. 2551-2557
- 59) "Laser annealing of Al implanted silicon carbide: Structural and optical characterization"  
C. Boutopoulos, P. Terzis, I. Zergioti, A.G. Kontos, K. Zekentes, K. Giannakopoulos, Y.S. Raptis  
Applied Surface Science 253 (2007), (Proc. E-MRS-H Symposium, 2006), 7912–7916.
- 60) "Theoretical comparison of 3C-SiC and Si nanowire FETs in ballistic and diffusive regimes"  
K. Rogdakis, M. Bescond, E. Bano, K. Zekentes  
Nanotechnology 18 (2007) 475715 and in,  
Mat. Sci. Forum. 600-603 (2009) (Proc. of ICSCRM'07, Oct. 2007, Otsu, Japan) pp.579-582
- 61) "Photoluminescence and optically detected magnetic resonance investigations of wurtzite phase 4H-SiC"  
V. Yu. Ivanov, M. Godlewski, E. N. Kalabukhova, C. A. Dimitriadis, K. Zekentes  
Optical Materials 30 (2008) (Proc. Int. Workshop Adv. Spectr. & Opt. Mat., June 2006, Poland) pp. 746-748
- 62) "4H-SiC p-i-n diodes grown by sublimation epitaxy in vacuum (SEV) and their application as microwave diodes"  
N Camara, K Zekentes, V V Zelenin, P L Abramov, A V Kirillov, L P Romanov, N S Boltovets, V A Krivutsa, A  
Thuairé, E Bano, E Tsoi and A A Lebedev  
Semicond. Sci. Technol. 23 (2008) 025016
- 63) "Microwave modulators based on 4H-SiC p-i-n diodes"  
K. Zekentes, N. Camara, V. V. Basanets, M. S. Boltovets, V. A. Krivutsa, V. O. Orechovskij, V. I. Simonchuk A.  
V. Zorenko, and E. Bano  
IEEE Trans. Microwave Theory & Techniques, 56 (2008) pp. 803-808
- 64) "On application of electrochemical capacitance-voltage profiling technique for n-type SiC"  
M. Mynbaeva, M. Kayambaki, K. Mynbaev, K. Zekentes  
Semicond. Sci. Technol. 23 (2008) 075039
- 65) "3C-Silicon Carbide nanowire FET: An experimental and theoretical Approach"  
K. Rogdakis, S. Y. Lee, M. Bescond, S. K. Lee, E. Bano and K. Zekentes  
IEEE Trans. Electron Dev., 55 (2008) pp. 1970-1976
- 66) "Fabrication of Ion-implanted Si Nanowire p-FETs"  
S. Y. Lee, C.O. Jang, D.J. Kim, J.H. Hyung, K. Rogdakis, E. Bano, K. Zekentes, S. K. Lee  
J. Phys. Chem. C, 112 (2008) pp.13287-13291
- 67) "Cr/4H-SiC Schottky contacts investigated by electrical and photoelectron spectroscopy techniques."  
J. Dontas, H. Koliakoudakis, S. Karakalos, M. Kayambaki, S. Ladas, G. Konstantinidis, K. Zekentes, S. Kennou  
Phys. Stat. Sol. A, 205(11), (2008) (Proc. of MMN'07, Sept. 2007, Athens, Greece) pp. 2536-2540
- 68) "Theoretical and experimental operating wavelength of GaAs/Al<sub>0.25</sub>Ga<sub>0.75</sub>As IR photodetectors"  
A. Almagoussi, A. Abounadi, H. Akabli, K. Zekentes, and M. Androulidaki  
Eur. Phys. J. Appl. Phys. **45**, (2009), p. 20301

- 69) "Si nanowire p-FET with asymmetric source\_drain I\_V characteristics"  
S. K. Lee, S.Y. Lee, K. Rogdakis, C.O. Jang, D.J. Kim, E. Bano, K. Zekentes  
Solid State Communications 149 (2009) 461\_463
- 70) "Phase composition and electrical characteristics of nickel silicide Schottky contacts formed on 4H-SiC"  
I Nikitina, K Vassilevski, A Horsfall, N Wright, A G O'Neill, S K Ray, K Zekentes and C M Johnson  
Semicond. Sci. Technol. **24** (2009) p. 055006
- 71) "Phonon- and surface-roughness-limited mobility of gate-all-around 3C-SiC and Si nanowire FETs"  
K Rogdakis, S Poli, E Bano, K Zekentes and M G Pala  
Nanotechnology **20** (2009) p. 295202
- 72) "SiC nanowires: material and devices"  
K. Zekentes, K. Rogdakis  
J. Phys. D: Appl. Phys. 44 (2011) 133001 (Invited Topical Review)
- 73) "Rectifying source and drain contacts for effective carrier transport modulation of extremely doped SiC nanowire FETs"  
K. Rogdakis, E. Bano, L. Montes, M. Bechelany, D. Cornu and K. Zekentes  
IEEE Trans. on Nanotechnology, **10**(5) (2011) pp. 980-984 and in Materials Science Forum Vols. 679-680 (2011) (Proc. of ECSCRM'11, Sept. 2011, Oslo, Norway) pp 613-616
- 74) "TCAD models of the temperature and doping dependence of the bandgap and low field carrier mobility in 4H-SiC"  
D. Stefanakis, K. Zekentes  
Microelectron. Eng. Vol. 116, (2014), Pages 65–71
- 75) "Direct growth of thick AlN layers on nanopatterned Si substrates by cantilever epitaxy", I. Demir, Y. Robin, R. McCintock, S. Elagoz, K. Zekentes and M. Razeghi  
Phys. Status Solidi A 214, No. 4, 1600363 (2017) / DOI 10.1002/pssa.201600363
- 76) " Channel width effect on the operation of 4H-SiC vertical JFETs"  
K. Vamvoukakis, D. Stefanakis, A. Stavrinidis, K. Vassilevski, G. Konstantinidis, M. Kayambaki, K. Zekentes  
Phys. Status Solidi A 214, No. 4, 1600452 (2017) / DOI 10.1002/pssa.201600452

Submitted/to be submitted publications

**Publications in peer-reviewed conference proceedings included in ISI/SCOPUS/GOOGLE SCHOLAR Citation Indexes**

- 77) "Confined States in InGaAs/InAlAs single quantum wells studied by room temperature phototransmittance and electrotransmittance at high electric fields"  
A. Dimoulas, A. Georgakilas, G. Halkias, K. Zekentes, K. Michelakis, A. Christou.  
Inst. Phys. Conf. Ser. No 120, Ch. 5, 1992, pp. 263-266 (Proceedings of 18th Int. Conf. on "GaAs and Related Compounds" Seattle, USA, 1991)
- 78) "Electrochemical C-V profiling of p-type 6H-SiC"  
M. Kayambaki, K. Zekentes  
Mat. Sci. For. Vols. 338-342 (2000) (Proc. of ICSCRM'99, Oct. 1999, Raleigh, USA), pp. 1061-1064.
- 79) "Structural and morphological characterization of Al/Ti-based ohmic contacts on p-type 4H-SiC annealed under various conditions"  
K. V. Vassilevski, K. Zekentes, G. Constantinidis, N. Papanicolaou, I. P. Nikitina, A. I. Babanin,  
Mat. Sci. For. Vols. 338-342 (2000) (Proc. of ICSCRM'99, Oct. 1999, Raleigh, USA), pp. 1017-1020.
- 80) "Electrochemical characterization of p-type hexagonal SiC"  
M. Kayambaki, K. Zekentes, K. Tsagaraki, E. Pernot and R. Yakimova

Mat. Sci. For. Vols. 353-356 (2001) (Proc. ECSCRM2000, September 2000, Erlangen, Germany), pp. 619-622.

- 81) "Silicon carbide Zener diodes"  
K. V. Vassilevski, K. Zekentes, E. Bogdanova, M. Lagadas and A. Zorenko  
Mat. Sci. For. Vols. 353-356 (2001) (Proc. ECSCRM2000, September 2000, Erlangen, Germany), pp.735-738.
- 82) "Origin of the excellent thermal stability of Al/Si-based ohmic contacts to p-type 4H-SiC"  
L. Kassamakova, R. Kakanakov, I. Kassamakov, K. Zekentes, K. Tsagaraki and G. Atanasova.  
Mat. Sci. For. Vols. 353-356 (2001) (Proc. ECSCRM2000, September 2000, Erlangen, Germany), pp.251-254.
- 83) "In situ RHEED studies on the influence of Ge on the early stages of SiC on Si (111) and (100) surfaces"  
V. Cimalla, K. Zekentes, K. Tsagaraki, Th. Stauden, F. Scharmann and J. Pezoldt.  
Mat. Sci. For. Vols. 353-356 (2001) (Proc. ECSCRM2000, September 2000, Erlangen, Germany), pp. 187- 190.
- 84) "Reliable ohmic contacts to LPE p-type 4H-SiC for high power p-n diode"  
R. Kakanakov, L. Kassamakova, N. Hristeva, G. Lepoeva, N. Kuznetsov, K. Zekentes  
Mat. Sci. For. Vols. 389-393 (2002) (Proc. of ICSCRM'01, Oct. 2001, Tsukuba, Japan), pp. 917-920.
- 85) "Growth and characterization of three-dimensional SiC nanostructures on Si"  
V. Cimalla, K. Zekentes  
Mat. Sci. For. Vols. 389-393 (2002) (Proc. of ICSCRM'01, Oct. 2001, Tsukuba, Japan), pp. 747-750
- 86) "Photon emission analysis of defect-free 4H-SiC p-n diodes in avalanche regime  
C. Banc, E. Bano, T. Ouisse, K. Vassilevski and K. Zekentes  
Mat. Sci. For. Vols. 389-393 (2002) (Proc. of ICSCRM'01, Oct. 2001, Tsukuba, Japan), pp. 1293-1296
- 87) "4H-SiC IMPATT Diode Fabrication and Testing"  
K.V. Vassilevski, A.V. Zorenko, K. Zekentes, K. Tsagaraki, E. Bano, C. Banc, A.A. Lebedev  
Mat. Sci. For. Vols. 389-393 (2002) (Proc. of ICSCRM'01, Oct. 2001, Tsukuba, Japan), pp. 1353-1358
- 88) "4H-SiC pn diode grown by LPE method for high power applications"  
N. Kuznetsov, D. Bauman, A. Gavrilin, L. Kassamakova, R. Kakanakov, G. Sarov, T. Cholakova, K. Zekentes, V. Dmitriev  
Mat. Sci. For. 433-436 (2003) (Proc. ECSCRM2002, September 2002, Linköping, Sweden), pp. 867-870
- 89) "Reliability of 4H-SiC p-n diodes on LPE grown layers"  
G.Sarov, R.Kakanakov, T.Cholakova, L.Kassamakova, N.Hristeva, G.Lepoeva, P.Philipova, N.Kuznetsov, K.Zekentes  
Mat. Sci. For. 433-436 (2003) (Proc. ECSCRM2002, September 2002, Linköping, Sweden), pp. 929-932
- 90) "Pd-Based Ohmic Contacts to LPE 4H-SiC with Improved Thermal Stability"  
L. Kassamakova-Kolaklieva, R. Kakanakov, V. Cimalla, N. Hristeva, G. Lepoeva, N. Kuznetsov, K. Zekentes  
Mat. Sci. For. 433-436 (2003) (Proc. ECSCRM2002, September 2002, Linköping, Sweden), pp. 713-716
- 91) "Thermally Stable Low Resistivity Ohmic Contacts for High Power and High Temperature SiC Device Applications"  
R. Kakanakov, L. Kassamakova-Kolaklieva, N. Hristeva, G. Lepoeva, K. Zekentes  
Proc. 23rd Inter. Conf. Microelectronics (MIEL 2002), May 2002, Published by Electron Device Society (IEEE Cat. 02TH8595), pp. 205-208
- 92) "Current transport mechanisms in 4H-SiC pn diodes"  
N.Camara, E.Bano, K.Zekentes  
Mat. Sci. Forum. 457-460 (2004) (Proc. of ICSCRM'03, Oct. 2003, Lyon, France), pp. 1017-1020.
- 93) "Electrochemical C-V profiling of n-type 4H-SiC"  
K.Zekentes, M. Kayambaki, S. Mousset  
Mat. Sci. Forum. 457-460 (2004) (Proc. of ICSCRM'03, Oct. 2003, Lyon, France), pp. 681-684
- 94) "Low voltage silicon carbide Zener diode"

- K.V. Vassilevski, K. Zekentes, A.B. Horsfall, C. M. Johnson, N. G. Wright  
Mat. Sci. Forum. 457-460 (2004) (Proc. of ICSCRM'03, Oct. 2003, Lyon, France), pp. 1029-1032
- 95) "Simulation of switching 4H-SiC p-i-n diodes and microwave modulators on their basis"  
Bludov A.V., Boltovets M.S., Vassilevski K.V., Zorenko A.V., Zekentes K., Lebedev A.A., Krivutsa V.A.  
Mat. Sci. Forum. 457-460 (2004) (Proc. of ICSCRM'03, Oct. 2003, Lyon, France), pp. 1089-1092
- 96) "Theoretical investigations of the microwave characteristics of TUNNET diodes made of silicon carbide"  
V. V. Buniatyan, V. M. Aroutiounian, K. Zekentes, N. Camara, P. Soukiassian  
Mat. Sci. Forum. 457-460 (2004) (Proc. of ICSCRM'03, Oct. 2003, Lyon, France), pp. 977-980
- 97) "Investigation of microwave switching 4H-SiC p-i-n diodes in the 20 ÷ 500°C temperature range"  
Boltovets M.S., Basanets V.V., N. Camara, Krivutsa V.A., Zekentes K.  
Mat. Sci. Forum. 483-485 (2005) (Proc. of ECSCRM'04, Sept. 2004, Bologne, Italy), pp. 997-1000
- 98) "Photoemission of 4H SiC pin diodes epitaxied by the sublimation method"  
N. Camara, K. Zekentes, E. Bano, A. Thuair, A. Lebedev  
Mat. Sci. Forum. 527-529 (2006) (Proc. of ICSCRM'05, Oct. 2005, Pittsburgh, USA), pp. 391-394.
- 99) "Theoretical Study of An Effective Field Plate Termination for SiC Devices Based on High-k Dielectrics"  
M. Brezeanu, M. Badila, G. Brezeanu, F. Udrea, C. Boianeanu, G.A.J. Amaratunga, K. Zekentes  
Mat. Sci. Forum. 527-529 (2006) (Proc. of ICSCRM'05, Oct. 2005, Pittsburgh, USA), pp. 1087-1090.
- 100) "Via Hole Formation in Silicon Carbide by Laser Micromachining"  
K. Zekentes, I. Zergioti, A. Klini, G. Constantinidis  
Mat. Sci. Forum. 527-529 (2006) (Proc. of ICSCRM'05, Oct. 2005, Pittsburgh, USA), pp. 1119-1121.
- 101) "About the nature of recombination current in 4H-SiC pn structures"  
A. M. Strelchuk, A. V. Mashichev, A. A. Lebedev, A. N. Volkova and K. Zekentes  
Mat. Sci. Forum. 527-529 (2006) (Proc. of ICSCRM'05, Oct. 2005, Pittsburgh, USA), pp. 1343-1346
- 102) "Investigation of packaged high-voltage 4H SiC pin diodes in the 20-700 °C temperature range"  
Boltovets M.S., Basanets V.V., Camara N., Krivutsa V.A., Zekentes K.  
Mat. Sci. Forum. 527-529 (2006) (Proc. of ICSCRM'05, Oct. 2005, Pittsburgh, USA), pp. 1375-1378.
- 103) "CM-wave modulator with high-voltage 4H SiC pin diodes"  
M.S. Boltovets, V.V. Basanets, A.V. Zorenko, V.A. Krivutsa, N. Camara, V.O. Orechovskij, V.I. Simonchuk and  
K. Zekentes  
Mat. Sci. Forum. 527-529 (2006) (Proc. of ICSCRM'05, Oct. 2005, Pittsburgh, USA), pp. 1379-1382.
- 104) "Microwave p-i-n Diodes and Switches Based on 4H-SiC"  
K. Zekentes, N. Camara, L.P. Romanov, A.V. Kirillov, M.S. Boltovets  
Mat. Sci. Forum. 556-557 (2007) (Proc. of ECSCRM'06, Sept. 2006, Newcastle, UK) pp. 999-1002
- 105) "Microwave p-i-n diodes fabricated on 4H-SiC material grown by sublimation epitaxy in vacuum"  
N. Camara, L.P. Romanov, A.V. Kirillov, M.S. Boltovets, A.A. Lebedev, V.V. Zelenin, M. Kayambaki, K.  
Zekentes  
Mat. Sci. Forum. 556-557 (2007) (Proc. of ECSCRM'06, Sept. 2006, Newcastle, UK) pp. 933-936.
- 106) "Coupling between the Raman Spectroscopy and Photoemission Microscopy Techniques: Investigation of Defects  
in Biased 4H-SiC pin Diodes"  
A. Thuair, M. Mermoux, E. Bano, A. Crisci, F. Baillet and K. Zekentes  
Mat. Sci. Forum. 556-557 (2007) (Proc. of ECSCRM'06, Sept. 2006, Newcastle, UK) pp. 909-912.
- 107) "Comparison between Schottky diodes with oxide ramp termination on silicon carbide and diamond"  
G. Brezeanu, M. Brezeanu, F. Udrea, G. Amaratunga, C. Boianeanu, M. Badila, K. Zekentes  
Mat. Sci. Forum. 556-557 (2007) (Proc. of ECSCRM'06, Sept. 2006, Newcastle, UK) pp. 865-868.
- 108) "Microwave switches and modulators based on 4H-SiC p-i-n diodes"  
K. Zekentes, V. V. Basanets, M. S. Boltovets, V. A. Kryvutsa, V. O. Orechovskij, V. I. Simonchuk, A.  
V. Zorenko, L. P. Romanov, A. V. Kirillov, E. Bano, N. Camara  
Mat. Sci. Forum. 600-603 (2009) (Proc. of ICSCRM'07, Oct. 2007, Otsu, Japan) pp.1019-1022



- 109) "Effect of Source and Drain Contacts Schotky Barrier on 3C-SiC Nanowire"  
K. Rogdakis, S. Y. Lee, D.J. Kim, S. K. Lee, E. Bano and K. Zekentes  
Mat. Sci. Forum. 615-617 (2009) (Proc. of ECSCRM'08, Sept. 2008, Barcelona, Spain) pp.235-238
- 110) "Fabrication and Characterization of Cr-Based Schottky Diode on n-type 4H-SiC"  
H. Koliakoudakis, J. Dontas, S. Karakalos, M. Kayambaki, S. Ladas, G. Konstantinidis, S. Kennou and K. Zekentes,  
Mat. Sci. Forum. 615-617 (2009) (Proc. of ECSCRM'08, Sept. 2008, Barcelona, Spain) pp.651-654
- 111) "Field Effect Transistors Based on Catalyst-Free Grown 3C-SiC Nanowires"  
K. Rogdakis, E. Bano, L. Montes, M. Bechelany, D. Cornu and K. Zekentes  
Mat. Sci. Forum. 645-648 (2010) (Proc. of ICSCRM'09, Oct. 2009, Erlangen, Germany) pp. 1235-1238
- 112) "Growth of SiC Nanowires through Si Nanowires Carburization"  
M. Ollivier, A. Mantoux, E. Bano, K. Rogdakis, K. Zekentes, T. Baron and L. Latu-Romain  
Mat. Sci. Forum. 679-680 (2011) (Proc. of ECSCRM'10, Sept 2010, Norway) pp. 505-508
- 113) "Material limitations for the development of high performance SiC NWFETs"  
K. Zekentes, K. Rogdakis and E. Bano  
Mat. Sci. Forum. 711(2012) (Proc. of HETEROSiC'11, June 2011, France) pp.70-74
- 114) "Fabrication issues of 4H-SiC Static Induction Transistors"  
A. Stavrinidis, G. Konstantinidis, M. Kayambaki, F. Cayrel, D. Alquier, Z. Gao and K. Zekentes  
Mat. Sci. Forum. 717-720 (2012) (Proc. of ICSCRM'11, Sept 2011, Cleveland, USA). pp. 1049-1052
- 115) "Room temperature physical characterization of implanted 4H- and 6H-SiC"  
K. Zekentes, K. Tsagaraki, M. Androulidaki, M. Kayambaki, A. Stavrinidis, H. Peyre and J. Camassel  
Mat. Sci. Forum. 717-720 (2012) (Proc. of ICSCRM'11, Sept 2011, Cleveland, USA) pp 589-592
- 116) "The formation of new periodicities after N-implantation in 4H- and 6H- SiC samples"  
K. Zekentes, K. Tsagaraki, A. Breza and N. Frangis  
Mat. Sci. Forum. 740-742 (2013) (Proc. of ECSCRM'12, Sept 2011, St. Petersburg, Russia) pp 447-450
- 117) "4H-SiC VJFETs with self-aligned contacts"  
K. Zekentes, A. Stavrinidis, G. Konstantinidis, M. Kayambaki, K. Vamvoukakis, E. Vassakis, K. Vassilevski, Alton B. Horsfall, N. G. Wright, P. Brosselard, S. Niu, M. Lazar, D. Planson, D. Tournier, N. Camara  
Mat. Sci. Forum. 821-823 (2015) (Proc. of ECSCRM'14, Sept 2014, Grenoble, France) pp793-796
- 118) "Si NWs conversion to Si-SiC core-shell NWs by MBE"  
F. Lloret, D. Araujo, M.P. Villar, L. Liu and K. Zekentes  
Mat. Sci. Forum. 821-823 (2015) (Proc. of ECSCRM'14, Sept 2014, Grenoble, France) pp. 965-969
- 119) "Modelling of 4H-SiC VJFETs with self-aligned contacts"  
K. Zekentes, K. Vassilevski, A. Stavrinidis, G. Konstantinidis, M. Kayambaki, K. Vamvoukakis, E. Vassakis, H. Peyre, N. Makris, M. Bucher, P. Schmid, D. Stefanakis, D. Tassis  
Mat. Sci. Forum. 858 (2016) (Proc. of ICSCRM'15, Oct. 2015, Catania, Italy) pp913-916
- 120) "Comparison of bottom-up and top-down 3C-SiC NWFETs"  
J. Choi, E. Bano, A. Henry, G. Attolini and K. Zekentes  
Mat. Sci. Forum. 858 (2016) (Proc. of ICSCRM'15, Oct. 2015, Catania, Italy) pp1001-1005
- 121) "Electrical transport properties of highly aluminum doped p-type 4H-SiC"  
S. Contreras Sylvie, L. Konczewicz, P. Kwasnicki, R. Arvinte, H. Peyre, T. Chassagne, M. Zielinski, M. Kayambaki Maria, S. Juillaguet, K. Zekentes  
Mat. Sci. Forum. 858 (2016) (Proc. of ICSCRM'15, Oct. 2015, Catania, Italy) pp249-252
- 122) "Salicide-Like Process for the Formation of Gate and Source Contacts in 4H-SiC TSI-VJFET"  
A. Stavrinidis, G. Konstantinidis, K. Vamvoukakis, K. Zekentes  
Mat. Sci. Forum. 897 (2017) (Proc. of ECSCRM'16, Sept. 2016, Chalkidiki, Greece) pp407-410
- 123) "Capacitances in 4H-SiC TSI-VJFETs"

M. Kayambaki, K. Vamvoukakis, A. Stavrinidis, G. Konstantinidis, N. Kornilios, K. Zekentes  
Mat. Sci. Forum. 897 (2017) (Proc. of ECSCRM'16, Sept. 2016, Chalkidiki, Greece) pp591-594

- 124) "On the optimum determination and use of SiC VJFET Threshold Voltage"  
M. Kayambaki, N. Makris, A. Stavrinidis, G. Konstantinidis, K. Zekentes  
Mat. Sci. Forum. 924 (2018) (Proc. of ICSCRM'18, Sept. 2018, Washington DC, USA) pp. 657-660
- 125) "Cross-section doping topography of 4H-SiC VJFETs by various techniques"  
K. Tsagaraki, M. Nafouti, H. Peyré, K. Vamvoukakis, N. Makris, M. Kayambaki, A. Stavrinidis, G. Konstantinidis, M. Panagopoulou, D. Alquier, K. Zekentes  
Mat. Sci. Forum. 924 (2018) (Proc. of ICSCRM'18, Sept. 2018, Washington DC, USA) pp. 653-656
- 126) "A Continuous Semi-Empirical VJFET Capacitance Model from Sub to above Threshold Regime"  
N. Makris, M. Kayambaki, A. Stavrinidis, G. Konstantinidis, K. Zekentes  
Mat. Sci. Forum. 924 (2018) (Proc. of ICSCRM'18, Sept. 2018, Washington DC, USA) pp. 649-652

#### **Publications in peer reviewed journals not included in ISI/SCOPUS Citation Indexes**

- 127) "On Silicon Carbide Thermal Oxidation"  
A. Benfdila and K. Zekentes  
African Physical Review (2010) 4:0005, pp. 25-30

#### **Publications in peer reviewed proceedings of International Conferences**

- 128) "Observation of metastable effects in pseudomorphic heterostructures InGaAs/InAlAs"  
L. Konczewicz, J.M. Mercy, M. Baj, J.L. Robert, K. Zekentes, A. Georgakilas, G. Halkias, A. Christou.  
High Pressure Res., Vol.9,1992, pp. 97-100 (Proc. XXIX Annual Sci. meeting EHPRG, Thessaloniki, 1991)
- 129) "Parity allowed and forbidden transitions in  $\text{In}_x\text{Ga}_{1-x}\text{As}/\text{In}_{0.52}\text{Al}_{0.48}\text{As}$  single quantum wells by room temperature modulation spectroscopy"  
A. Dimoulas, J. Leng, K.P. Giapis, K. Zekentes, G. Halkias, A. Christou.  
Proceedings of 21 Int. Conf. Phys. of Semicond. (ICPS 21), 1992, Beijing, China, pp. 1024-1027
- 130) "Evidence for the 3-Al configuration of the DX center in the GaAlAs alloy"  
S. Contreras, V. Mosser, H. Gazo, L. Konczewicz, L.L. Robert, K. Zekentes  
Proceedings of 21 Int. Conf. Phys. of Semicond. (ICPS 21), 1992, Beijing, China, pp. 1573-157
- 131) "Fractional dimensionality of weakly localized electrons in GaAs-Ga<sub>0.7</sub>Al<sub>0.3</sub>As heterostructures"  
S. Ravanomanjato, K.A. Zekentes, J.L. Robert, W. Zawadzki  
Proceedings of 21 Int. Conf. Phys. of Semicond. (ICPS 21), 1992, Beijing, China, pp. 1194-1197
- 132) "Electrical and optical characterization of InAlAs/InGaAs/InAlAs single quantum well structures"  
J.M. Lopez-Villegas, P. Roura, J. Bosch, J.R. Morante, A. Georgakilas, K. Zekentes  
Proceedings of "Sixteen European Workshop on Compound Semiconductor Device and Integrated Circuits (WOCSDICE 92)", Spain, 1992
- 133) "Optical studies of lattice-matched and strained SQW of GaInAs/AlInAs"  
Tabata, T. Benyattou, S. Moneger, Y. Baltagi, G. Guillot, A. Georgakilas, K. Zekentes, G. Halkias.  
Proceedings of SPIE's Symposium on "Compound Semiconductor Physics and Devices", Conference 1678, March 1992, New Jersey, USA
- 134) "Optical characterization of lattice-matched and strained GaInAs/AlInAs single quantum wells"  
Tabata, T. Benyattou, S. Moneger, J. Grange, G. Guillot, A. Georgakilas, K. Zekentes, G. Halkias.  
Proceedings of 4th Inter. Conf. on "InP and Related Materials", April 1992, Newport, USA (Ed. by IEEE/LEOS), pp. 129-132

- 135) "InGaAs Molecular Beam Epitaxy in InP wells prepared by reactive ion etching"  
Georgakilas, K. Zekentes, K. Tsagaraki, P. Lefebvre, J. Allegre, A. Christou  
Proceedings of 4th Inter. Conf. on "InP and Related Materials", April 1992, Newport, USA (Ed. by IEEE/LEOS), pp. 101-104
- 136) "Suppression of the kink effect in InGaAs/InAlAs HEMT's grown by MBE by optimizing the InAlAs buffer layer"  
Georgakilas, G. Halkias, K. Zekentes, N. Kornilios, A. Dimoulas, F. Peiro, A. Cornet, A. Christou  
Proceedings of 4th Inter. Conf. on "InP and Related Materials", April 1992, Newport, USA (Ed. by IEEE/LEOS), pp. 97-100
- 137) "Weak antilocalization and spin precession in quantum wells and heterojunctions"  
W.Knap, C.Skierbiszewski, G.E. Pikus, E.Litwin-Staszewska, S.V.Iordanskii, F.Kobbi, A. Zduniak, J.L.Robert, V.Mosser, K.Zekentes  
Proc. of 22 Int. Conf. Phys. of Semicond. (ICPS 22), Vancouver 1994, Canada, p. 935
- 138) "Characterization of main electron scattering mechanisms in InGaAs/InAlAs single quantum wells by optical modulation spectroscopy"  
Y. Baltagi, C. Bru, T. Benyattou, S. Moneger, A. Georgakilas, K. Zekentes, G. Halkias  
Proceedings of SPIE's Symposium on "Physical Concepts and Materials for Novel Optoelectronic Device Applications II", Vol. 1985, May 1993, Trieste, Italy, pp. 433-441.
- 139) "The MBE technology for selective area embedded InGaAs layers in InP substrates"  
Georgakilas, A. Christou, K. Zekentes, K. Tsagaraki, G. Halkias, P. Lefebvre, J. Allegre  
Oral presen. in "SPIE' s Internationnal Symposium on Optoelectronic Packaging and Interconnects", Los Angeles, USA, 1993
- 140) "Study of main electron scattering mechanisms in InGaAs/InAlAs single quantum wells by photoreflectance measurements versus temperature"  
Y. Baltagi, C. Bru, T. Benyattou, S. Moneger, A. Georgakilas, K. Zekentes, G. Halkias  
Proceedings of 5th Inter. Conf. on "InP and Related Materials", April 1993, Paris, France (Ed. by IEEE/LEOS)
- 141) "Admittance spectroscopy measurements on AlInAs/GaInAs/AlInAs quantum well structures: evidence of a deep level assisted tunneling"  
S. Ababou, G. Guillot, S. Clark, G. Halkias, A. Georgakilas, K. Zekentes, D. Stievenard, X. Letartre, M. Lanou  
Proceedings of 5th Inter. Conf. on "InP and Related Materials", April 1993, Paris, France (Ed. by IEEE/LEOS)
- 142) "Physics of AlGaAs/InGaAs/GaAs heterostructures for high performance magnetic sensors"  
V. Mosser, S. Contreras, S. Aboulhouda, Ph. Lorenzini, F. Kobbi, J.L Robert, K. Zekentes  
Proceedings of "ESSDERC 93" Conference, Sept. 1993, Grenoble, France, pp. 659-662
- 143) "Characterization of pseudomorphic HEMT structures by modulation spectroscopy"  
Dimoulas, K. Zekentes, M. Androulidaki  
Presented at MRS Fall Meeting 1993, Boston MA, USA
- 144) "Structural characterization of the  $\beta$ -SiC/Si interface"  
J. Stoemenos, B. Pesz, K. Zekentes, P.B. Barna  
Presented at ICEM 13, 1994, Paris, France
- 145) "Structural characterization of InAlAs/InGaAs layers grown on InP patterned substrates"  
F. Peiro, A. Cornet, J. R. Morante, K. Zekentes, A. Georgakilas  
Mat. Res. Soc. Symp. Proc. Vol. 340, (1994), p.59
- 146) "Growth and stress characterization of LPCVD SiC films deposited on bare, carbonized and oxidized Si (100) substrates"  
E. Hurtos, J. Rodriguez-Viejo, K. Zekentes, M. T. Clavaguera-Mora  
Mat. Res. Soc. Symp. MRS Fall Meeting 1998, Boston MA, USA
- 147) "Isothermal I-V characteristics of 4H-SiC p-n diodes with low series differential resistivity at avalanche breakdown"  
K. Vassilevski, K. Zekentes, A. Zorenko, L. Romanov.  
Mat. Res. Soc. Symp. Vol. 622, T1.8.1-T1.8.6, (2000), (Spring MRS meeting, 2000, St. Francisco, USA).

- 148) "Electrical characterization of 4H-SiC p<sup>+</sup>-n-n<sup>+</sup> avalanche diodes"  
K. Vassilevski, K. Zekentes, E. Bogdanova, A. Zorenko  
Proceedings of "24th Workshop on Compound Semiconductor Device and Integrated Circuits (WOCSDICE 00)", Greece, 2000, p. VIII-19.
- 149) "4H-SiC p<sup>+</sup>-n-n<sup>+</sup> Zener and IMPATT diodes"  
K. Vassilevski, K. Zekentes, M. Lagadas, A. Zorenko  
Presented at MMN 2000 Conf., November 20-22, Athens, Greece
- 150) "4H-SiC p<sup>+</sup>-n-n<sup>+</sup> Zener and IMPATT diodes"  
K. Vassilevski, K. Zekentes, M. Lagadas, N. Papanicolaou, A. Zorenko, L. Romanov  
Proceedings of "25th Workshop on Compound Semiconductor Device and Integrated Circuits (WOCSDICE 00)", Italy, 2001, p. 167.
- 151) "X-band Silicon Carbide IMPATT Oscillator"  
K. Vassilevski, A. V. Zorenko, K. Zekentes  
Mat. Res. Soc. Symp. Vol. 622, (2001) (Spring MRS meeting, 2001, St. Francisco, USA), T1.8.1.
- 152) "Current transport mechanisms in 4H-SiC pin diodes".  
N. Camara, E. Bano, K. Zekentes  
Proceedings of CAS 2003, Sinaia, Romania, 2003, p.
- 153) "Current transport mechanisms in 4H-SiC pin diodes".  
N. Camara, E. Bano, K. Zekentes  
Proceedings of "12th European Workshop on Heterostructure Technology (HETECH 2003)", San Rafael, Spain, October 2003, p. TueB6
- 154) "Processing Technology of SiC-based microwave diodes"  
N. Camara, K. Zekentes  
Proceedings of "13th European Workshop on Heterostructure Technology (HETECH 2004)", Heraklion, Greece, October 2004
- 155) "4H-SiC pin diodes for microwave applications"  
K. Zekentes, N. Camara, L.P. Romanov, A. V. Kirillov, M.S. Boltovets, A. Lebedev, K. V. Vassilevski  
Proceedings of CAS 2005 (ISBN: 0-7803-9214-0), October 2005, Sinaia, Romania, pp. 17-25.
- 156) "Microwave p-i-n diodes and switches based on 4H-SiC"  
K. Zekentes, N. Camara, G. Konstantinidis, L. P. Romanov, A. V. Kirillov, M. S. Boltovets  
Proceedings of 36<sup>th</sup> European Microwave Conference (ISBN 2-9600551-6-0), September 2006, Manchester, UK, pp. 99-102
- 157) "Laser annealing of 4H-SiC implanted layers"  
P. Terzis, I. Zergioti, K. Zekentes  
Proceedings of "15th European Workshop on Heterostructure Technology (HETECH 2006)", Manchester, UK, October 2006
- 158) "Reverse characteristics behaviour of 4H-SiC pin diodes"  
C. Boianeanu, K. Zekentes  
Proceedings of "15th European Workshop on Heterostructure Technology (HETECH 2006)", Manchester, UK, October 2006
- 159) "Termination Optimization for 4H-SiC *P-i-n* Diodes"  
C. Boianeanu, K. Zekentes, N. Camara, M. Kayambaki, W. Rouet  
Proceedings of CAS 2006 (ISBN: 1-4244-0109-7), October 2006, Sinaia, Romania, pp. 327-330
- 160) "High speed modulator in Q-band range on 4H-SiC p-i-n diodes"  
R. D. Kakanakov, L. P. Kolaklieva, L.P. Romanov, A. V. Kirillov, A. A. Lebedev, M.S. Boltovets, K. Zekentes  
Proceedings of 25<sup>th</sup> International Conference on Microelectronics-MIEL2006, (1-4244-0117-8/06/\$20.00 ©2006 IEEE), May 2006, pp. 293-296
- 161) "High frequency SiC-based PIN diodes"  
N. Camara, K. Zekentes, M. Boltovets, V.V. Basanets, V.A. Kryvutsa, V.O. Orechovskij, V.I. Simonchuk,

A.V.Zorenko, L.P. Romanov, A.V. Kirillov E. Bano  
Proceedings of "16th European Workshop on Heterostructure Technology (HETECH 2007)", San Rafael, France, September 2007

- 162) "Successful Electrochemical C-V profiling of n-type 4H-SiC"  
K. Zekentes, M. Kayambaki, M. Mynbaeva  
Proceedings of "16th European Workshop on Heterostructure Technology (HETECH 2007)", San Rafael, France, September 2007
- 163) "Fabrication and characterization of Cr-based Schottky diode on n-type 4H-SiC"  
C. Koliakoudakis, J. Dontas, S. Karakalos, M. Kayambaki, S. Ladas, G. Konstantinidis, K. Zekentes, S. Kennou  
Proceedings of "17th European Workshop on Heterostructure Technology (HETECH 2008)", Venice, Italy, November 2008, p. 129.
- 164) "Electrical properties of 3C-SiC nanowires"  
Konstantinos Rogdakakis, Seoung-Yong Lee, Marc Bescond, Dong-Joo Kim, Sang-Kwon Lee, Edwige Bano and Konstantinos Zekentes  
Proceedings of "17th European Workshop on Heterostructure Technology (HETECH 2008)", Venice, Italy, November 2008, p. 131.
- 165) " Backscattering coefficient in gate-all-around 3C-SiC nanowire FETs "  
K. Rogdakakis, E. Bano, M. Pala, S. Poli and K. Zekentes  
Proceedings of IEEE NANO 2009, Genoa, Italy, July 26-30, 2009
- 166) "Application of Physical Characterization Methods during fabrication of 4H-SiC Static Induction Transistors"  
K. Zekentes, M. Androulidaki, K. Tsagaraki, M. Kayambaki, A. Stavrinidis, G. Konstantinidis  
Proceedings of "19th European Workshop on Heterostructure Technology (HETECH 2010)", Fodele, Greece, October 2010, p. 19.
- 167) "Fabrication of 4H-SiC Static Induction Transistors"  
Antonis Stavrinidis, George Konstantinidis<sup>1</sup>, Maria Kayambaki and Konstantinos Zekentes  
Proceedings of "20th European Workshop on Heterostructure Technology (HETECH 2011)", Lille, France, November 2011, p. ????.
- 168) "SiC nanowire FET operation improvement by using Schottky contacts at source and drain regions"  
Konstantinos Rogdakakis, Edwige Bano, Laurent Montes, Mikhael Bechelany, David Cornu and Konstantinos Zekentes  
Proceedings of "35th Workshop on Compound Semiconductor Device and Integrated Circuits (WOCSDICE 2011)", Italy, 2011, p. 69.
- 169) "TCAD simulation of 4H-SiC physical parameters"  
Dionysios Stefanakis, Konstantinos Zekentes  
Proceedings of "21st European Workshop on Heterostructure Technology (HETECH 2012)", Barcelona, Spain, October 2012.
- 170) "Low temperature photoluminescence investigation of aluminum implanted 6H-SiC"  
Teddy Robert, Maria Androulidaki, Pawel Kwasnicki, Hervé Peyre, Sandrine Juillaguet, Konstantinos Zekentes and Jean Camassel  
Proceedings of "11<sup>th</sup> Expert evaluation & Control of Compound Semiconductor Materials & Technologies (EXMATEC 2012)", Porquerolles, France, May 2012.
- 171) "4H-SiC VJFETs with self-aligned contacts"  
K. Zekentes, K. Vassilevski, A.B. Horsfall, N.G. Wright, A. Stavrinidis, G. Konstantinidis, M. Kayambaki  
Proceedings of "36th Workshop on Compound Semiconductor Device and Integrated Circuits (WOCSDICE 2013)", Germany, 2013, p. 53.
- 172) "Temperature effect in Si NWs conversion to SiC by using MBE"  
F Lloret, D. Araujo, K. Zekentes, M.P. Villar  
Proceedings of "22th European Workshop on Heterostructure Technology (HETECH 2013)", Glasgow, UK, September 2013, p.48
- 173) "Comparison of bottom-up and top-down 3C-SiC NWFETs"  
J. Choi, E. Bano, L. Latu-Romain, A. Henry, G. Attolini and K. Zekentes

- 174) "Electrical characterization procedure of power transistors: Application in the case of 4H-SiC VJFETs"  
M. Vassakis, K. Vamvoukakis, M. Bucher, L. Liu, K. Zekentes  
Proceedings of "37th Workshop on Compound Semiconductor Device and Integrated Circuits (WOCSDICE 2014)", Delphi, Greece, June 2014, p. 85
- 175) "TCAD simulations of 4H-SiC VJFETs"  
D. Stefanakis, M. Vassakis, K. Vamvoukakis, L. Liu, D. Tassis, K. Zekentes  
Proceedings of "37th Workshop on Compound Semiconductor Device and Integrated Circuits (WOCSDICE 2014)", Delphi, Greece, June 2014, p. 109
- 176) "Conversion of Si to SiC for nanowire FET fabrication"  
F. Lloret, D. Araujo, M.P. Villar, L. Liu, K. Zekentes  
Proceedings of "12<sup>th</sup> Expert evaluation & Control of Compound Semiconductor Materials & Technologies (EXMATEC 2014)", Delphi, Greece, June 2014, p. 273
- 177) "Electrical characterization of 4H-SiC VJFETs"  
M. Vassakis, K. Vamvoukakis, M. Bucher, K. Zekentes  
Proceedings of "23rd European Workshop on Heterostructure Technology (HETECH 2014)", Barcelona, Germany, October 2014, p.33
- 178) "Top-down 3C-SiC NWFETs"  
Jihoon Choi, Edwige Bano, Anne Henry, Giovanni Attolini and Konstantinos Zekentes  
Proceedings of "39th Workshop on Compound Semiconductor Device and Integrated Circuits (WOCSDICE 2016)", Aveiro, Portugal, June 2016, p.
- 179) "High power self-aligned, trench-implanted 4H-SiC JFETs"  
K. Vamvoukakis, A. Stavrinidis, D. Stefanakis, G. Konstantinidis, M. Kayambaki, K. Zekentes  
Digest of "11th European Space Power Conference", Thessaloniki, Greece, October 2016, p.
- 180) "Silicon Carbide Nanowire Field Effect Transistors"  
K. Zekentes, E. Bano  
Proc. 13th International Conference on Atomically Controlled Surfaces, Interfaces and Nanostructures (ACSIN 2016), October 2016, Frascati, Rome, Italy, p. 33
- 181) "HIGH POWER SELF-ALIGNED, TRENCH-IMPLANTED 4H-SiC JFET"  
K. Vamvoukakis, A. Stavrinidis, D. Stefanakis, G. Konstantinidis, M. Kayambaki, K. Zekentes  
E3S Web of Conferences, 12001 (2017), 16  
Proc. European Space Power Conference (ESPC 2016), October 2016, Thessaloniki, Greece  
DOI: 0.1051/e3sconf/20171612001

### **Publications in proceedings of National Conferences**

- 1) "Gas source molecular beam epitaxy of 3C-SiC on Si substrates"  
K. Zekentes, K. Tsagaraki, M. Androulidaki, J. Stoemenos, N. Becourt  
XI Hellenic Conference of Solid State Physics, 1995, Xanthi
- 2) "Conversion of Si surface to 3C-SiC with Molecular Beam Epitaxy" K. Zekentes, J. Stoimenos,  
X Hellenic Conference of Solid State Physics, 1994, Delphes

- 3) "Stability of Au Schottky diodes on  $\beta$ -SiC" N. Kornilios, G. Konstanidis, M. Kayiambaki, K. Tsagaraki, K. Zekentes, J. Stoimenos, X Hellenic Conference of Solid State Physics, 1994, Delphes
- 4) "High sensitivity Hall sensors with low thermal drift using AlGaAs/InGaAs/GaAs heterostructures" K. Zekentes, TEE meeting on Sensors, May 1993
- 5) "Caracterisation des niveaux profonds dans AlInAs epitaxie par jets moleculaires" S. Ababou, C. Raynaud, G. Guillot, S. Clark, K. Zekentes, 3emes Journees de la Matiere Condensee, 1992, Lille
- 6) "Determination par spectroscopie d'admittance de la discontinuite de bande dans des puits quantiques GaInAs-AlInAs" S. Ababou, G. Guillot, S. Clark, K. Zekentes, 3emes Journees de la Matiere Condensee, 1992, Lille
- 7) "Selective epitaxy of  $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$  on (001) InP substrates" K. Zekentes, K. Tsagaraki, A. Dimoulas, K. Michelakis, A. Georgakilas, A. Christou VII Hellenic Conference of Solid State Physics, 1991, Thessaloniki
- 8) "Determination of charges distribution in structures, of III-V based semiconductors, by the C-V profiling method" N. Kornilios, K. Zekentes VII Hellenic Conference of Solid State Physics, 1991, Thessaloniki
- 9) "Confined States in InGaAs/InAlAs single quantum wells studied at high electric fields" A. Dimoulas, A. Georgakilas, K. Zekentes, K. Michelakis, G. Halkias, A. Christou VII Hellenic Conference of Solid State Physics, 1991, Thessaloniki
- 10) "Etude des effets de pression sur la localisation faible des electrons 2D d'une heterojonction: Magnetoresistance negative de GaAs/GaAlAs" S.Ravanomanjato, K.Zekentes, J.L.Robert,G.Cohen-Solal Conference nationale de la Societe Francaise de Physique, Montpellier 1990
- 11) "Weak Localization of 2D electron gas in GaAs-GaAlAs heterostructures under hydrostatic pressure" K.Zekentes, J.L.Robert VI Hellenic Conference of Solid State Physics, 1990, Heraklion, Crete
- 12) "A Compact Model for Silicon Carbide JFET" Konstantinos Kostopoulos, Matthias Bucher, Maria Kayambaki, and Konstantinos Zekentes PACET 2012, Thessaloniki, Greece, March 16-18