

### **A step félvezetőtechnológiai szimulációs program**

Tarnay, K.; Drozdy, G.; Masszi, F.; **Rang, Toomas** Mérés és automatika: megjelenik a Méréstechnikai és Automatizálási Tudományos Egyesület Szerkesztésében 1981 / p. 460-464

### **A7 P<sub>L</sub> kapu modellezése a TRAN-TRAN nemlineáris áramközalakizós program segítségével**

**Rang, Toomas** Híradástechnika = Journal on communications, computers, convergence, contents, companies 1980 / p. 216-220

### **Ambient temperature influence on current suppressing effect caused by self-heating phenomenon at 6H-SiC Schottky interfaces**

**Kurel, Raido; Rang, Toomas** BEC'98 : the 6th Biennial Conference on Electronics and Microsystems Technology, October 7-9, 1998, Tallinn, Estonia : proceedings 1998 / p. 253-254: ill

### **An analysis of critical parameters of SiC JBS structures**

**Kurel, Raido; Rang, Toomas;** Poirier, Laurent Proceedings of the Estonian Academy of Sciences. Engineering 2006 / 3-2, p. 284-299 : ill

### **Analog front end components for bio-impedance measurement : current source design and implementation = Bioimpedantsi mõõteseadme analoogosa komponendid : vooluallika disain ja realisatsioon**

**Kasemaa, Argo** 2011 <https://digi.lib.ttu.ee/i/2590>

### **Analysis of barrier inhomogeneities of P-type Al/4H-SiC Schottky barrier diodes**

**Ziko, Mehadi Hasan; Koel, Ants; Rang, Toomas; Toompuu, Jana** Silicon Carbide and Related Materials 2019 : Selected peer-reviewed papers from International Conference on Silicon Carbide and Related Materials 2019 (ICSCRM 2019), September 29 - October 4, 2019, Kyoto, Japan Materials science forum 2020 / p. 960-972 <https://doi.org/10.4028/www.scientific.net/MSF.1004.960>  
[Conference proceedings at Scopus](#) [Article at Scopus](#)

### **Analysis of deep level centers in GaAs pin-diode structures**

**Korolkov, Oleg; Toompuu, Jana; Rang, Toomas** Elektronika ir elektrotehnika = Electronics and electrical engineering 2013 / [4 p. ] : ill <https://doi.org/10.5755/j01.eee.19.10.5903> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Analysis of deep level spectrum in GaAs p+-p-i-n-n+ structures**

**Toompuu, Jana; Sleptšuk, Natalja; Korolkov, Oleg; Rang, Toomas** Materials characterization VII 2015 / p. 283-294 : ill

### **Analysis of peak current for current crowding effect in 4H- and 6H-SiC Schottky structures**

**Kurel, Raido; Rang, Toomas** The 7th Biennial Conference on Electronics and Microsystem Technology "Baltic Electronics Conference" : BEC 2000 : October 8 - 11, 2000, Tallinn, Estonia : conference proceedings 2000 / p. 235-236 : ill

### **Analysis of the basic Schottky parameters for diffusion-welded aluminium contacts to p- and n-type SiC**

**Korolkov, Oleg; Ljutov, Jevgeni;** Kuznetsova, Natalja; Ruut, Jana; **Rang, Toomas** BEC 2004 : proceedings of the 9th Biennial Baltic Electronics Conference : October 3-6, 2004, Tallinn, Estonia 2004 / p. 51-53 : ill

### **Andursignaalide töötlemine ja andursüsteemid : metoodiline juhend**

1989 [https://www.ester.ee/record=b1240066\\*est](https://www.ester.ee/record=b1240066*est)

### **Andursignaalide töötlemine ja andursüsteemid : metoodiline juhend**

1988 [https://www.ester.ee/record=b1239930\\*est](https://www.ester.ee/record=b1239930*est)

### **Application of power line communication technology in street lighting control**

**Farkas, Tekla D.;** Kiraly, Tamás; **Pardy, Tamas; Rang, Toomas; Rang, Galina** International journal of design and nature and ecodynamics 2018 / p. 176-186 : ill <https://doi.org/10.2495/DNE-V13-N2-176-186> [Journal metrics at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Arukad põhjendused pole veel kedagi veennud : [TTÜ arengutest tulevikus]**

**Rang, Toomas** Mente et Manu 2004 / 3. nov., lk. 2, 4 : fot [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

### **ASIC for alcohol sensor**

**Kasemaa, Argo; Rang, Toomas** BEC'98 : the 6th Biennial Conference on Electronics and Microsystems Technology, October 7-9, 1998, Tallinn, Estonia : proceedings 1998 / p. 283-286: ill

### **Az P<sub>L</sub> sztatikus zavar védettsége**

**Rang, Toomas** Mérés és automatika: megjelenik a Méréstechnikai és Automatizálási Tudományos Egyesület Szerkesztésében 1980 / p. 466-468

### **Balti elektroonika konverents (BEC'96)**

**Rang, Toomas** SAT-Meedia ja Elektroonika 1996 / 8, lk. 14-15: ill

**Balti elektroonikakonverents 2002 : [TTÜ elektroonikainstituudi korraldusel toimuvast rahvusvahelisest konverentsist BEC'2002]**

**Rang, Toomas** Mente et Manu 2002 / 8. okt., lk. 1 : ill [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

**Balti elektroonikakonverents BEC 2010**

**Rang, Toomas** Tallinna Tehnikaülikooli aastaraamat 2010 2011 / lk. 279-280

**Balti elektroonikakonverentsid**

**Rang, Toomas** Tallinna Tehnikaülikooli aastaraamat 2011 2012 / lk. 308-316

**Baltic Electronics Conference 1996 : (BEC' 96)**

**Rang, Toomas** Baltic electronics 1995 / 1, p. 38

**Baltic Electronics Conference (BEC) series : long and winding road**

**Rang, Toomas** BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 11-16

**Baltic Electronics Conference BEC'96**

**Rang, Toomas** Baltic electronics 1996 / 3, p. 25-26

**BEC : Baltic Electronics Conference : proceedings of the 4th Biennial Conference, October 9-14, 1994, Tallinn (Estonia)**

**Rang, Toomas; Min, Mart; Ubar, Raimund-Johannes** 1994

**BEC 2002 : proceedings of the 8th Biennial Baltic Electronics Conference : October 6-9, 2002, Tallinn, Estonia**

**Rang, Toomas** 2002 [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

**BEC 2004 : proceedings of the 9th Biennial Baltic Electronics Conference : October 3-6, 2004, Tallinn, Estonia**

2004 [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

**BEC 2006 : 2006 International Baltic Electronics Conference : Tallinn University of Technology, October 2-4, 2006, Tallinn, Estonia : proceedings of the 10th Biennial Baltic Electronics Conference**

**Rang, Toomas** 2006 [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

**BEC 2006 järelkajad : [intervjuu Toomas Rangiga elektroonikute konverentsi teemal]**

**Rang, Toomas; Ummelas, Mart** Mente et Manu 2006 / 18. okt., lk. 2 : fot [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

**BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia**

**Rang, Toomas** 2008 [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

**BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 4-6, 2010, Tallinn, Estonia**

**Rang, Toomas** 2010 [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

**BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia**

2012 [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

**BEC 2014 : 2014 14th Biennial Baltic Electronics Conference : proceedings of the 14th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 6-8, 2014, Tallinn, Estonia**

**Rang, Toomas** 2014 [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

**BEC 2016 : 2016 15th Biennial Baltic Electronics Conference : proceedings of the 15th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 3-5, 2016, Tallinn, Estonia**

**Rang, Toomas** 2016 [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

**BEC'96 : the 5th Biennial Baltic Electronics Conference, October 7-11, 1996, Tallinn, Estonia : proceedings**

**Rang, Toomas; Min, Mart; Ubar, Raimund-Johannes** 1996 [https://www.ester.ee/record=b2150914\\*est](https://www.ester.ee/record=b2150914*est)

**BEC'98 : the 6th Biennial Conference on Electronics and Microsystems Technology, October 7-9, 1998, Tallinn, Estonia : proceedings**

**Rang, Toomas** 1998 [https://www.ester.ee/record=b2150914\\*est](https://www.ester.ee/record=b2150914*est)

### **Can 3D printing bring droplet microfluidics to every lab? - A systematic review**

**Gyimah, Nafisat; Scheler, Ott; Rang, Toomas; Pardy, Tamas** Micromachines 2021 / art. 339 <https://doi.org/10.3390/mi12030339>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Change in the parameters of electron-irradiated 4H-SiC Schottky diodes as a function of the time during low-temperature isothermal annealing**

**Korolkov, Oleg; Kozlovski, Vitali V.; Lebedev, Alexander A.; Toompuu, Jana; Sleptsuk, Natalja; Rang, Toomas** Silicon Carbide and Related Materials 2018 : 12th European Conference on Silicon Carbide and Related Materials (ECSCRM 2018) : Selected, peer reviewed papers from the European Conference on Silicon Carbide and Related Materials (ECSCRM 2018), September 2-6, 2018, Birmingham, UK 2019 / p. 734-737 <https://doi.org/10.4028/www.scientific.net/MSF.963.734> [Conference proceeding at Scopus](#)  
[Article at Scopus](#)

### **Characterization of deep level traps in semiconductor structures using numerical experiments**

**Koel, Ants; Rang, Toomas; Rang, Galina** Materials characterization VII 2015 / p. 253-261 : ill

### **Characterization of silicon carbide (SiC) and graphene-based novel semiconductor devices = Ränikarbiidil (SiC) ja grafeenil põhinevate uudsete pooljuhtstruktuuride karakteriseerimine**

**Rashid, Muhammad Haroon** 2021 [https://www.ester.ee/record=b5397240\\*est](https://www.ester.ee/record=b5397240*est) <https://digikogu.taltech.ee/et/Item/a64fd50e-125c-49ad-b0a6-6ad2e01b8bfa> <https://doi.org/10.23658/taltech.6/2021>

### **Characterization of the temperature dependent behavior of snappy phenomenon by the switching-off of GaAs power diode structures**

**Koel, Ants; Rang, Toomas; Rang, Galina** Heat transfer XIII : simulation and experiments in heat and mass transfer 2014 / p. 439-449 : ill <https://doi.org/10.2495/HT140381> [Conference proceedings at Scopus](#) [Article at Scopus](#)

### **Charge carrier transport in SiC Schottky interfaces : shape factor approach**

**Kurel, Raido; Rang, Toomas; Rang, Galina; Kasemaa, Argo** BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 87-90 : ill

### **Circuit simulation program oriented physical modeling of integrated circuit elements**

**Rang, Toomas; Tamay, K.; Szekely, V.** Periodica polytechnica. Electrical engineering = Электротехника 1980 / p. 37-45  
[https://www.ester.ee/record=b1198855\\*est](https://www.ester.ee/record=b1198855*est)

### **Clamp mode package diffusion welded power SiC Schottky diodes**

**Korolkov, Oleg; Kuznetsova, Natalja; Rang, Toomas** BEC 2006 : 2006 International Baltic Electronics Conference : Tallinn University of Technology, October 2-4, 2006, Tallinn, Estonia : proceedings of the 10th Biennial Baltic Electronics Conference 2006 / p. 55-58 : ill

### **CMOS low power current source with reduced circuit complexity**

**Kasemaa, Argo; Rang, Toomas; Annus, Paul** IEEE 9th International New Circuits and Systems Conference (NEWCAS) : Bordeaux-France, 26-29 June 2011 : [proceedings] 2011 / p. 17-20 <https://www.semanticscholar.org/paper/CMOS-low-power-current-source-with-reduced-circuit-Kasemaa-Rang/f5e490ce914a4c6c3195586a28147211c928c28d>

### **CMOS SP chip for resistor type semiconductor gas sensors**

**Kasemaa, Argo; Rang, Toomas** The 7th Biennial Conference on Electronics and Microsystem Technology "Baltic Electronics Conference" : BEC 2000 : October 8 - 11, 2000, Tallinn, Estonia : conference proceedings 2000 / p. 255-256 : ill

### **Co-design of a wireless networked control system for reliability and resource-efficiency**

**Ashraf, Kanwal; Le Moullec, Yannick; Pardy, Tamas; Rang, Toomas** 2024 19th Biennial Baltic Electronics Conference (BEC) 2024 / 7 p <https://doi.org/10.1109/BEC61458.2024.10737965>

### **Co-design of wireless networked control systems : a reliable and resource-efficient approach**

**Ashraf, Kanwal; Le Moullec, Yannick; Pardy, Tamas; Rang, Toomas** techrxiv.org 2024 / 9 p. : ill  
<https://www.techrxiv.org/users/693853/articles/683291-co-design-of-wireless-networked-control-systems-a-reliable-and-resource-efficient-approach>

### **Cogniflow-drop : integrated modular system for automated generation of droplets in microfluidic applications**

**Jõemaa, Rauno; Gyimah, Nafisat; Ashraf, Kanwal; Pärnamets, Kaiser; Zaft, Alexander; Scheler, Ott; Rang, Toomas; Pardy, Tamas** IEEE Access 2023 / p. 104905-104929 <https://doi.org/10.1109/ACCESS.2023.3316726> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Compact empirical model for droplet generation in a Lab-on-Chip cytometry system**

**Pärnamets, Kaiser; Udal, Andres; Koel, Ants; Pardy, Tamas; Gyimah, Nafisat; Rang, Toomas** IEEE Access 2022 / p. 127708-127717 <https://doi.org/10.1109/ACCESS.2022.3226623> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Comparative characteristics of 6H- and 4H-SiC surfaces in diffusion welding**

**Korolkov, Oleg; Rang, Toomas** Proceedings of the Estonian Academy of Sciences. Engineering 2001 / 4, p. 347-353 : ill

### **Comparative characteristics of diffusion welded Al contacts to 6H- and 4H-SiC substrates**

**Korolkov, Oleg; Rang, Toomas** The 7th Biennial Conference on Electronics and Microsystem Technology "Baltic Electronics Conference" : BEC 2000 : October 8 - 11, 2000, Tallinn, Estonia : conference proceedings 2000 / p. 23-26 : ill

### **Comparative characteristics of diffusion-welded high-voltage stacks and connected in series Schottky diodes**

**Sleptšuk, Natalja; Korolkov, Oleg; Land, Raul; Toompuu, Jana; Annus, Paul; Rang, Toomas** BEC 2016 : 2016 15th Biennial Baltic Electronics Conference : proceedings of the 15th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 3-5, 2016, Tallinn, Estonia 2016 / p. 39-42 : ill [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

### **Comparative investigation of the graphene-on-silicon carbide and CVD graphene as a basis for biosensor application**

**Sleptšuk, Natalja;** Lebedev, Alexander A.; Eliseyev, Ilya; **Korolkov, Oleg; Toompuu, Jana; Land, Raul; Mikli, Valdek;** Zubov, Alexander; **Rang, Toomas** Modern Materials and Manufacturing 2019 : 12th International DAAAM Baltic Conference and 27th International Baltic Conference BALTMATTRIB 2019. Selected, peer reviewed papers from the conference Modern Materials and Manufacturing 2019 (MMM 2019), April 24-26, 2019, Tallinn, Estonia 2019 / p. 185-190 : ill [https://www.ester.ee/record=b5235278\\*est](https://www.ester.ee/record=b5235278*est) <https://www.scientific.net/KEM.799.185> <https://doi.org/10.4028/www.scientific.net/KEM.799.185> [Conference proceeding at Scopus Article at Scopus](#)

### **Comparison of GaAs based high voltage diode stacks**

**Voitovič, Viktor;** Kuznetsova, Natalja; **Rang, Toomas; Pikkov, Mihhail;** Ruut, Jana EPE-PEMC 2004 : 11th International Power Electronics and Motion Control Conference : 2-4 September 2004, Riga, Latvia : proceedings. Vol. 2 of 7, Devices, control of converters, measurements and sensors 2004 / p. 2-391 - 2-394 : ill

### **Comparison of individual SiC JBS chips and JBS stacks connected in series by diffusion welding**

**Sleptšuk, Natalja; Korolkov, Oleg; Toompuu, Jana; Rang, Toomas** BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 81-84 : ill

### **Comparison of the dynamic behaviour of complementary 6H- and 4H-SiC Schottky structures using numerical simulation**

**Rang, Toomas; Kurel, Raido** Proceedings of the Estonian Academy of Sciences. Engineering 2004 / 3, p. 173-178

### **Comparison of turn-on characteristics of thyristor structures based on wide bandgap materials**

**Rang, Toomas;** Vaselo, Aleksandr; **Rang, Galina; Pikkov, Mihhail** Proceedings of the Estonian Academy of Sciences. Engineering 2007 / 4, p. 445-454 : ill

### **Complementary multi guard ring JBS structures: numerical analysis**

Koel, Ants; **Rang, Toomas; Rang, Galina** BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 85-88 : ill

### **Computer aided examination of P<sup>L</sup> structures**

**Rang, Toomas** International journal of electronics 1981 / p. 445-463 <https://doi.org/10.1080/00207218108901286>

### **Computer aided examination of the avalanche multiplication in Si, GaA and lKp complementary pn-junctions**

**Rang, Toomas** Modelling, simulation and control 1985 / p. 23-40

### **Computer aided modeling of high frequency power M-S structures**

**Rang, Toomas; Udal, Andres** Proceedings of the seventh Colloquium on Microwave Communication : Budapest, 6-10 Sept. 1982 1982 / p. 238-241

### **Computer aided simulation of dynamic behaviour of the P<sup>L</sup> flip-flop**

**Rang, Toomas** Microelectronics '82 : proceedings of the 3. Microelectronics Conference of the Socialist Countries ; from 5.-7. May 1982, Siófok, Hungary 1982 / p. 153-154

### **Computer aided simulation of power Scottky Diodes**

**Rang, Toomas; Koel, Ants; Udal, Andres** Modeling, Simulation and Control 1985 / p. 1-13

### **Computer-aided examination of the P<sup>L</sup> current source and the behaviour of the P<sup>L</sup> flip-flop used in static memory cells**

**Rang, Toomas** Periodica polytechnica. Electrical engineering = Электротехника 1981 / p. 159-165 : joon [https://www.ester.ee/record=b1198855\\*est](https://www.ester.ee/record=b1198855*est) <https://pp.bme.hu/ee/article/view/4776/3881>

### **Contact manufacturing technologies for wide band-gap semiconductor materials (invited)**

**Rang, Toomas** BEC'98 : the 6th Biennial Conference on Electronics and Microsystems Technology, October 7-9, 1998, Tallinn, Estonia : proceedings 1998 / p. 17-28: ill

### **Current crowding phenomenon in JBC structures**

**Rang, Toomas; Kurel, Raido;** Higelin, G.; Poirier, Laurent Computer Methods and Experimental Measurements for Surface Effects and Contact Mechanics VII 2005 / p. 387-396 <https://www.witpress.com/elibrary/wit-transactions-on-engineering-sciences/49/15383>

### **Current suppressing effect in alloy metal and 6H-SiC substrate Schottky contacts**

**Rang, Toomas;** Blum, Alfons BEC'96 : the 5th Biennial Baltic Electronics Conference, October 7-11, 1996, Tallinn, Estonia : proceedings 1996 / p. 81-84: ill

### **Deep reinforcement learning-based digital twin for droplet microfluidics control**

**Gyimah, Nafisat; Scheler, Ott; Rang, Toomas; Pardy, Tamas** Physics of Fluids 2023 / art. 082020 <https://doi.org/10.1063/5.0159981>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Design of Cyber Bio-analytical Physical Systems : formal methods, architectures, and multi-system interaction strategies**

**Ashraf, Kanwal; Le Moullec, Yannick; Pardy, Tamas; Rang, Toomas** Microprocessors and microsystems 2023 / art. 104780, 14 p. : ill <https://doi.org/10.1016/j.micpro.2023.104780> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Design of two stage high efficiency power amplifier in 0.13um technology for 2.4 GHz ISM band applications**

**Patankar, Udayan Sunil; Koel, Ants; Rang, Toomas** Journal of Advanced Research in Dynamical and Control Systems 2018 / p. 822-829 <http://www.jardcs.org/backissues/abstract.php?archiveid=3585>

### **Development of a low-cost, wireless smart thermostat for isothermal DNA amplification in lab-on-a-chip devices**

**Pardy, Tamas; Sink, Henri; Koel, Ants; Rang, Toomas** Micromachines 2019 / art. 437, 13 p. : ill <https://doi.org/10.3390/mi10070437>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Development of automated detection and wireless reporting for a handheld point-of-care test**

**Pardy, Tamas; Filograno, Leonardo;** Baumann, Cindy; **Rang, Toomas** 2020 17th Biennial Baltic electronics conference, Tallinn, Estonia, October 6-8, 2020 : proceedings 2021 / 4 p. : ill <https://doi.org/10.1109/BEC49624.2020.9276773>

### **Development of e-learning course: myths and reality**

**Rang, Toomas; Rang, Galina** Symposium "Topical Problems of Education in the Field of Electrical and Power Engineering" : Kuressaare, Estonia, January 19-24, 2004 2004 / p. 9-11

### **Development of national standard for voltage unit based on solid-state references = Pinge mõõtühiku riigietaloni arendamise Zener-tüüpi etalonpingeallikate baasil**

**Pokatilov, Andrei;** Kübarsepp, Toomas 2008 [https://www.ester.ee/record=b2425069\\*est](https://www.ester.ee/record=b2425069*est)

### **Development of temperature control solutions for non-instrumented nucleic acid amplification tests (NINAAT)**

**Pardy, Tamas; Rang, Toomas;** Tulp, Indrek Micromachines 2017 / p. 1-11 : ill <https://doi.org/10.3390/mi8060180> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Diffusion welded Al contacts to p-type SiC**

**Korolkov, Oleg; Rang, Toomas;** Syrkin, A.; Dmitriev, V. Silicon Carbide and Related Materials 2002 : ECSCRM2002 2003 / p. 697-700 <https://www.scientific.net/MSF.433-436.697>

### **Diffusion welded contacts and related art applied to semiconductor materials**

**Korolkov, Oleg; Sleptšuk, Natalja; Toompuu, Jana; Rang, Toomas** Elektronika ir elektrotehnika = Electronics and electrical engineering 2011 / p. 67-70 : ill <https://eejournal.ktu.lt/index.php/elt/article/view/359>

### **Diffusion welded contacts for silicon semiconductor devices**

**Korolkov, Oleg; Rang, Toomas** Proceedings of the International Conference and Exhibition Micro Materials : MicroMat '97, April 16-18, 1997, Berlin, Germany 1997 / p. 1035-1037

### **The diffusion welded contacts in power electronics**

**Korolkov, Oleg; Rang, Toomas** BEC : Baltic Electronics Conference : proceedings of the 4th Biennial Conference, October 9-14, 1994, Tallinn (Estonia). 2 1994 / p. 573-578: ill [https://www.ester.ee/record=b2150914\\*est](https://www.ester.ee/record=b2150914*est)

### **Diffusion welding contacts to 6H-SiC substrates**

**Korolkov, Oleg; Rang, Toomas** 43. Internationales Wissenschaftliches Kolloquium, 21.-24.09.1998 1998 / p. 47-48

### **Diffusion welding techniques for power SiC Schottky packaging**

**Korolkov, Oleg; Rang, Toomas;** Syrkin, A.; Dmitriev, V. Final program of the 12th International Conference on Silicon Carbide and Related Materials : ICSCRM2005 : Pittsburgh, PA, USA 2005 / p. 71

### **Diffusion welding techniques for power SiC Schottky packaging**

**Korolkov, Oleg; Rang, Toomas;** Syrkin, A.; Dmitriev, V. Silicon carbide and related materials 2005 2006 / p. 919-922

### **Diffusion welding technology as a method of metallization of ceramic substrates**

**Korolkov, Oleg; Rang, Toomas** BEC'96 : the 5th Biennial Baltic Electronics Conference, October 7-11, 1996, Tallinn, Estonia : proceedings 1996 / p. 479-482: ill

### **Diffusion welding technology for 6H-SiC substrates**

**Korolkov, Oleg; Rang, Toomas** BEC'98 : the 6th Biennial Conference on Electronics and Microsystems Technology, October 7-9, 1998, Tallinn, Estonia : proceedings 1998 / p. 251-252: ill

### **Diffusion welding technology for wide bandgap materials**

**Rang, Toomas; Korolkov, Oleg** Proceedings of the European COPEX Seminar, June 17-19, 1997, Vienna, Austria 1997 / p. 124-127

### **Digital twin for controlled generation of water-in-oil microdroplets with required size**

**Gyimah, Nafisat; Scheler, Ott; Rang, Toomas;** Pardy, Tamas 2022 23rd International Conference on Thermal, Mechanical and Multi-Physics Simulation and Experiments in Microelectronics and Microsystems (EuroSimE), 25-27 April 2022, St Julian, Malta : proceedings 2022 / p. 85-91 <https://doi.org/10.1109/EuroSimE54907.2022.9758876>

### **DLTS measurements on 4H-SiC JBS-diodes with boron implanted local p-n junctions**

Ivanov, Pavel; **Korolkov, Oleg;** Samsonova, Tatyana; **Sleptšuk, Natalja;** Potapov, Alexander; **Toompuu, Jana; Rang, Toomas** Materials science forum 2011 / p. 409-412 [https://www.researchgate.net/publication/272046403\\_DLTS\\_measurements\\_on\\_4H-SiC\\_JBS-diodes\\_with\\_boron\\_implanted\\_local\\_p-n\\_junctions](https://www.researchgate.net/publication/272046403_DLTS_measurements_on_4H-SiC_JBS-diodes_with_boron_implanted_local_p-n_junctions)

### **Education environment for electronics and microsystems**

**Ajaots, Maido; Min, Mart; Rang, Toomas; Ubar, Raimund-Johannes** Microelectronics education : proceedings of the European Workshop, Grenoble, France, 5-6 Feb 1996 1996 / p. 145-148: ill

### **Education environment for electronics and microsystems**

**Ajaots, Maido; Min, Mart; Rang, Toomas; Ubar, Raimund-Johannes** First European Workshop on Microelectronics Education, Villard de Lans, France, February 5-6, 1996 : proceedings 1996 / p. 39

### **Effects of the inclusion of armchair graphene nanoribbons on the electrical conduction properties of NN-heterojunction 4H-6H/SiC diodes**

**Rashid, Muhammad Haroon; Koel, Ants; Rang, Toomas** Advanced Materials and Processing Technologies : 2nd International Conference on Sensors, Materials and Manufacturing (ICSMM 2018, November 19-21, 2018, Taiwan); International Conference on Materials Sciences and Nanomaterials (ICMSN 2018, July 11-13, 2018, United Kingdom) and the 2nd International Conference on Materials and Intelligent Manufacturing (ICMIM 2018, August 24-26, 2018, Japan) 2019 / p. 29-35 : ill  
<https://doi.org/10.4028/www.scientific.net/MSF.962.29> Conference proceeding at Scopus Article at Scopus

### **Ela ise ja lase ka teistel elada! : [T.Rangi nägemus Tehnikaülikooli arengust eelseisvaks viieks aastaks]**

**Rang, Toomas** Mente et Manu 2005 / 12. jaan., lk. 5-6. (TTÜ 2005-2010) [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

### **Electron microscopy study of contact layers in n-type 4H-SiC after diffusion welding**

**Korolkov, Oleg; Sleptšuk, Natalja;** Sitnikova, A.; **Rang, Toomas** BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 91-94 : ill

### **Electronics design and test**

**Ubar, Raimund-Johannes; Kruus, Margus; Rang, Toomas** Public service review : European Union. 13 2007 / p. 52-53

### **Electronics in Estonia**

**Rang, Toomas** BEC'96 : the 5th Biennial Baltic Electronics Conference, October 7-11, 1996, Tallinn, Estonia : proceedings 1996 / p. 49-56: ill

### **Elektroonika - mis see on?**

**Rang, Toomas** Elektroonika 2004 : XI rahvusvahelise telekommunikatsioonipäeva materjalid 2004 / lk. 7-9

### **Elektroonika Eestis - tööstus, haridus, teadus**

**Rang, Toomas** Tallinna Tehnikaülikooli aastaraamat 1996 1997 / lk. 221-230

### **Elektroonika Eestis - tööstus, teadus, haridus - järeilmõtteid**

**Rang, Toomas** Insenerikultuur Eestis. 3 1997 / lk. 139-147 [https://www.ester.ee/record=b1063622\\*est](https://www.ester.ee/record=b1063622*est)

### **Elektroonika kui Eesti innovatsioonisüsteemi infrastruktuur**

**Min, Mart; Rang, Toomas; Ubar, Raimund-Johannes** Eesti teadlaste kongress, 11.-15. augustini 1996. a. Tallinnas : ettekannete kokkuvõtteid 1996 / lk. 265 [https://www.ester.ee/record=b1052731\\*est](https://www.ester.ee/record=b1052731*est)

### **Elektroonikainseneride harimisest meil ja mujal**

**Rang, Toomas** Elektroonika 2000 : VII rahvusvahelise telekommunikatsioonipäeva konverentsi ettekannete materjalid 2000 / lk. 7-14  
[https://www.ester.ee/record=b1399956\\*est](https://www.ester.ee/record=b1399956*est)

### **Elektroonikaspetsialistide koolitus tööstuse tarbeks - Elektroonikainstituudi visioon**

**Rang, Toomas** Raadiotehnika 2001 : VIII rahvusvahelise telekommunikatsioonipäeva materjalid 2001 / lk. 110-114 : ill

### **Elektroonikud pidasid konverentsi : [BEC'98]**

**Rang, Toomas** Tehnikaülikool 1998 / 12. okt., lk. 1

### **11th Baltic Electronics conference BEC2008**

**Rang, Toomas** Estonian journal of engineering 2010 / 1, p. 5-6 : ill

### **Embedded blur-free single-image acquisition pipeline for droplet microfluidic imaging flow cytometry (IFC)**

**Afrin, Fariha; Pärnamets, Kaiser; Le Moullec, Yannick; Udal, Andres; Koel, Ants; Pardy, Tamas; Rang, Toomas** IEEE Access 2024 / p. 92431-92441 <https://doi.org/10.1109/ACCESS.2024.3421637>

### **Estonian electronic industry**

**Rang, Toomas** Automation, simulation & measurement : ASM'91 : 3rd biennial conference, Tallinn, October 7-11, 1991. Section S / Tallinn Technical University 1992 / p. 4-10: ill

### **Estonian electronic industry - May 1995**

**Rang, Toomas; Tani, Harry; Tamm, Uljas** Baltic electronics 1995 / 1, p. 12-16: ill

### **Et progressirongist mitte maha jääda : [V Balti Elektroonika Konverents]**

**Rang, Toomas** Tehnikaülikool 1996 / 11. okt., lk. 1-2 [https://www.ester.ee/record=b5309277\\*est](https://www.ester.ee/record=b5309277*est)

### **E-õppe müüdid ja tegelikkus : omad ja laenatud kogemused**

**Rang, Toomas** Avaja 2004 / 21. jaan., lk. 8 : portr

### **Exercises. Final test questions : supplementary material in the course "Microelectronics"**

**Rang, Toomas** 2003 [https://www.ester.ee/record=b1766979\\*est](https://www.ester.ee/record=b1766979*est)

### **Experimental analysis of the dynamic performance of Si, GaAs and SiC diodes**

**Blinov, Andrei; Vinnikov, Dmitri; Rang, Toomas** BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 49-52 : ill

### **Experimental study of surface distortions in silicon carbide caused by diffusion welding**

Mizsei, Janos; **Korolkov, Oleg; Sleptšuk, Natalja; Toompuu, Jana; Rang, Toomas** BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 53-56 : ill

### **Feasibility study of Si and SiC MOSFETs in high-gain DC/DC converter for renewable energy applications**

**Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri; Rang, Toomas** Proceedings : IECON 2013 - 39th Annual Conference of the IEEE Industrial Electronics Society : Austria Center Vienna, Vienna, Austria, 10-14 November, 2013 2013 / p. 5975-5978 : ill  
<https://doi.org/10.1109/IECON.2013.6700115> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

### **Félvezető technológia számítógépes szimulációja**

**Rang, Toomas; Tamay, K.; Mizsei, Janos** Híradástechnika = Journal on communications, computers, convergence, contents, companies 1980 / p. 327-328

### **Finite element modelling for the optimization of microheating in disposable molecular diagnostics**

**Pardy, Tamas; Rang, Toomas; Tulp, Indrek** International journal of computational methods and experimental measurements 2017 / p. 13-22 : ill <https://doi.org/10.2495/CMEM-V5-N1-13-22> [Journal metrics at Scopus](#) [Article at Scopus](#)

### **Finite element modelling for the optimization of microheating in disposable molecular diagnostics [Electronic resource]**

**Pardy, Tamas; Rang, Toomas; Tulp, Indrek** 14th International Conference on Simulation and Experiments in Heat Transfer and its Applications : Heat Transfer 2016 : 7-9 September, 2016 Ancona, Italy : unedited papers 2016 / p. [144-155] : ill. [USB]

### **Finite element modelling of the resistive heating of disposable molecular diagnostics devices**

**Pardy, Tamas; Rang, Toomas; Tulp, Indrek** Computational methods and experimental measurements XVII 2015 / p. 381-391 : ill  
<http://dx.doi.org/10.2495/CMEM150341>

### **First principles simulations of phenol and methanol detector based on pristine graphene nanosheet and armchair**

## graphene nanoribbons

Rashid, Muhammad Haroon; Koel, Ants; Rang, Toomas Sensors 2019 / art. 2731, 14 p. : ill <https://doi.org/10.3390/s19122731>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## Foreford : twenty years of Baltic Electronics Conference in Tallinn

Rang, Toomas Proceedings of the Estonian Academy of Sciences. Engineering 2006 / 3-2, p. 244-245

## Formation of Diffusion welded Al contacts to semiconductor silicon carbide

Korolkov, Oleg 2004

## Formation of large area Al contacts on 6H- and 4H-SiC substrates

Korolkov, Oleg; Rang, Toomas Abstracts of the 3rd European Conference on Silicon Carbide and Related Materials : ECSCRM'2000 : Sept. 3-7, 2000, Kloster Banz, Germany 2000 / p. 188 <https://www.scientific.net/MSF.353-356.603>

## Formation of large area Al contacts on 6H- and 4H-SiC substrates

Korolkov, Oleg; Rang, Toomas Silicon Carbide and Related Materials : ECSCRM2000 : proceedings of the 3rd European Conference on Silicon Carbide and Related Materials : Kloster Banz, Germany, September 2000 2001 / p. 603-606 : ill

## A fully differential, 200MHz, programmable gain, level-shifting, hybrid amplifier/power combiner/test buffer, using pre-distortion for enhanced linearity

Kampus, Vahur; Rang, Toomas; Knaller, Daniel PRIME 2018 : 14th Conference on PhD Research in Microelectronics and Electronics 2018 / p. 5-8 : ill <https://doi.org/10.1109/PRIME.2018.8430372>

## GaAs based diffusion welded high voltage diode stacks [Electronic resource]

Toompuu, Jana; Korolkov, Oleg; Sleptšuk, Natalja; Voitovitš, Viktor; Rang, Toomas IEEE International Conference on Semiconductor Electronics CD-ROM Proceedings 2010 / [4] p <https://ieeexplore.ieee.org/document/5549505>

## Generalized analytical model for SiC polytypic heterojunctions

Rang, Toomas; Tabun, Indrek; Rang, Galina; Koel, Ants Estonian journal of engineering 2011 / 2, p. 151-157 : ill

## Globaliseerumisest ja konkursivõimest ülikoolimaailmas

Rang, Toomas; Hendre, Enn Mente et Manu 2002 / 19., 26. veebr., lk. 2 [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

## High performance GaAs power diodes

Voitovitš, Viktor; Rang, Toomas; Rang, Galina; Pikkov, Mihhail BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 111-114 : ill

## High quality LPE GaAs power diodes with DLTS method

Rang, Toomas Public service review : European Union 2009 / p. 423

## High quality metal ceramic interfaces using diffusion welding technology

Korolkov, Oleg; Rang, Toomas Proceedings of the ASDAM'96, Oct. 20-24, 1996, Bratislava, Slovakia 1996 / p. 309-312

## High voltage diffusion/welded stacks on the basis of SiC Schottky diodes

Korolkov, Oleg; Sleptšuk, Natalja; Annus, Paul; Land, Raul; Rang, Toomas ICSRM 2015 : program guide 2015 / p. 73

## High voltage GaAs diode stacks : the choice of epistuctures for assembling

Rang, Toomas; Voitovitš, Viktor; Kuznetsova, Natalja Design, Test, Integration and Packaging of MEMS/MOEMS - DTIP2004 : 12-14 May 2004, Montreux, Switzerland 2004 / p. 199-202 : ill

## High-voltage diffusion/welded stacks on the basis of SiC Schottky diodes

Korolkov, Oleg; Sleptšuk, Natalja; Annus, Paul; Land, Raul; Rang, Toomas Silicon carbide and related materials 2015 (ICSRM 2015) : selected, peer reviewed papers from the 16th International Conference on Silicon Carbide and Related Materials, October 4-9, 2015, Giardini Naxos, Italy 2016 / p. 790-794 : ill <https://doi.org/10.4028/www.scientific.net/MSF.858.790> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

## Hot spots caused by contact inhomogeneities in 4H- and 6H-SiC Schottky structures

Kurel, Raido; Rang, Toomas Advanced Computational Methods in Heat Transfer VI 2000 / p. 437-444  
<https://www.witpress.com/elibRARY/wit-transactions-on-engineering-sciences/27/4468>

## PL új irányrat a bipoláris technikában I

Rang, Toomas Mérés és automatika: megjelenik a Méréstechnikai és Automatizálási Tudományos Egyesület Szerkesztésében 1979 / p. 191-195



## **PL, új irányrat a bipoláris technikában II**

**Rang, Toomas** Mérés és automatika: megjelenik a Méréstechnikai és Automatizálási Tudományos Egyesület Szerkesztésében 1979 / p. 279-283

## **Innovatsioon - võimalus või vajadus**

**Rang, Toomas** Arengusuundumused Eestis ja Võrumaal 1997 / lk. 11-18

## **Instrument-free Lab-on-a-Chip DNA amplification test for pathogen detection [Online resource]**

**Pardy, Tamas; Rang, Toomas;** Kremer, Clemens; Tulp, Indrek BEC 2018 : 2018 16th Biennial Baltic Electronics Conference (BEC) : proceedings of the 16th Biennial Baltic Electronics Conference, October 8-10, 2018 2018 / 4 p. : ill  
<https://doi.org/10.1109/BEC.2018.8600991>

## **Integraalskeemide projekteerimine : metoodiline juhend**

1988 [https://www.ester.ee/record=b1239938\\*est](https://www.ester.ee/record=b1239938*est)

## **Integrált áramköri elemek fizikai modellezése aramkölanalizős program segítségével**

**Rang, Toomas;** Tarnay, K.; Szekely, V. Híradástechnika = Journal on communications, computers, convergence, contents, companies 1980 / p. 322-326

## **Integrated self-regulating resistive heating for isothermal nucleic acid amplification tests (NAAT) in Lab-on-a-Chip (LoC) devices**

**Pardy, Tamas;** Tulp, Indrek; Kremer, Clemens; **Rang, Toomas;** Stewart, Ray PLoS ONE 2017 / p. 1-11 : ill  
<https://doi.org/10.1371/journal.pone.0189968> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Interfaces to 6H-SiC substrates - technology and simulation**

**Rang, Toomas;** Blum, Alfons Proceedings of the Estonian Academy of Sciences. Engineering 1997 / 4, p. 250-259: ill

## **Interpretation of some physical parameters of SiC Schottky interfaces manufactured by diffusion welding technology**

**Rang, Toomas; Korolkov, Oleg;** Ljutov, Jevgeni Proceedings of the Estonian Academy of Sciences. Engineering 2004 / 3, p. 179-184

## **Investigation of additional states in the silicon carbide surface after diffusion welding**

Mizsei, Janos; **Korolkov, Oleg; Sleptšuk, Natalja; Toompuu, Jana; Rang, Toomas** ICSCRM2011 : Cleveland Ohio, USA, September 11-16, 2011 : abstracts 2011 / p. 356 : ill  
[https://www.researchgate.net/publication/269377410\\_Investigation\\_of\\_Additional\\_States\\_in\\_the\\_Silicon\\_Carbide\\_Surface\\_after\\_Diffusion\\_Welding](https://www.researchgate.net/publication/269377410_Investigation_of_Additional_States_in_the_Silicon_Carbide_Surface_after_Diffusion_Welding)

## **Investigation of barrier inhomogeneities and electronic transport on Al-Foil/p-Type-4H-SiCSchottky barrier Diodes using diffusion welding**

**Ziko, Mehadi Hasan; Koel, Ants; Rang, Toomas; Rashid, Muhammad Haroon** Crystals 2020 / p. 636-647  
<https://doi.org/10.3390/cryst10080636> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Investigation of deep level centers in i- and n-layers of GaAs pin-diodes**

**Toompuu, Jana; Korolkov, Oleg; Sleptšuk, Natalja; Rang, Toomas** BEC 2014 : 2014 14th Biennial Baltic Electronics Conference : proceedings of the 14th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 6-8, 2014, Tallinn, Estonia 2014 / p. 25-28 : ill

## **Investigation of electrical characteristics of SiC based complementary JBS structures**

**Kurel, Raido** 2005 [https://www.ester.ee/record=b2053292\\*est](https://www.ester.ee/record=b2053292*est)

## **Investigation of p-i-n GaAs structures by DLTS method**

**Toompuu, Jana; Korolkov, Oleg; Sleptšuk, Natalja; Rang, Toomas** Elektronika ir elektrotehnika = Electronics and electrical engineering 2010 / 4, p. 51-54 : ill [https://www.researchgate.net/publication/267372152\\_Investigation\\_of\\_p-i-n\\_GaAs\\_structures\\_by\\_DLTS\\_method](https://www.researchgate.net/publication/267372152_Investigation_of_p-i-n_GaAs_structures_by_DLTS_method)

## **Investigation of subcontact layers in SiC after diffusion welding**

**Korolkov, Oleg; Kuznetsova, Natalja; Sitnikova, A.; Viljus, Mart; Rang, Toomas** Silicon carbide and related materials 2007 2009 / p. 647-650

## **Investigation of subcontact layers in SiC after diffusion welding**

**Korolkov, Oleg; Kuznetsova, Natalja; Sitnikova, A.; Viljus, Mart; Rang, Toomas** Silicon carbide and related materials 2007 / p. 100 <https://www.scientific.net/MSF.600-603.647>

## **Investigation of the combined stress and strain situation in diffusion welded rectifying elements**

**Korolkov, Oleg; Rang, Toomas; Kurel, Raido** Surface treatment VI 2003 / p. 307-316 <https://www.witpress.com/elibrary/wit-transactions-on-engineering-sciences/39/1441>

**Investigation of the graphene-on-silicon-carbide and CVD graphene as a basis for bioimpedance sensor applications : poster**

**Sleptšuk, Natalja; Land, Raul; Toompuu, Jana; Lebedev, Alexander A.; Davydov, Valery; Eliseyev, Ilya; Kalinina, Evgenia; Korolkov, Oleg; Rang, Toomas** ePosters 2018 / 1 p.: ill <https://cdn.technologynetworks.com/ep/pdfs/natalja-sleptšuk-a-raul-land-a-jana-toompuu-a-alexander-lebedev-b-valery-davydov-b-ilya-eliseyev-b.pdf>

**Investigation of the intermediate layer in the metal-silicon carbide contact obtained by diffusion welding = Difusioonkeevitusega valmistatud metalli ja ränikarbiidi vahelise üleminekuala vahekihi uurimine**

**Sleptšuk, Natalja** 2011 [https://www.ester.ee/record=b2692547\\*est](https://www.ester.ee/record=b2692547*est)

**Ja nii nad tapsidki Ferdinandi... : [muutustest ülikoolides, ka TTÜs]**

**Rang, Toomas** Mente et Manu 2008 / 16. apr., lk. 2, 4 : portr. ; 30. apr., lk. 2 ; 16. mai, lk. 2 ; 30. mai, lk. 2 [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

**Joint optimization via deep reinforcement learning in wireless networked controlled systems**

**Ashraf, Kanwal; Le Moullec, Yannick; Pardy, Tamas; Rang, Toomas** IEEE Access 2022 / p. 67152-67167 <https://doi.org/10.1109/ACCESS.2022.3185244> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Kalman Tarnay (1929 - 1998)**

**Rang, Toomas** The 7th Biennial Conference on Electronics and Microsystem Technology "Baltic Electronics Conference" : BEC 2000 : October 8 - 11, 2000, Tallinn, Estonia : conference proceedings 2000 / p. V : portr

**Kas ilma elektroonikata on elu Eestis võimalik?**

**Rang, Toomas** IV Välis-Eesti kongress, 29.-30. juunil 1999. a. Tallinnas : ettekannete kokkuvõtted 1999 / lk. 106-108

**Kolledžis elektroonika õppekaval roheline tee : [Maret Panga ja Toomas Rangi kommentaaridega]**

**Aavik, Svea; Pank, Maret; Rang, Toomas** Meie Maa 2003 / 30. apr., lk. 1

**Kuhu lähed, Tehnikaülikool? : [TTÜ koht Eestis, tegevuse eesmärgid, tegevusvaldkonnad, ressursid, õppekavad, õppejõud ja üliõpilased, koostöö jm.]**

**Rang, Toomas** Tehnikaülikool 1999 / 29. apr., lk. 5-8

**Laia keelutsooniga pooljuhtmaterjalidel põhinevad pooljuhtseadised**

**Rang, Toomas; Rang, Galina** Teadusmõte Eestis (X). Tehnikateadused. 3 : [artiklikogumik] 2019 / lk. 169-176 : ill., fot [https://www.ester.ee/record=b5208765\\*est](https://www.ester.ee/record=b5208765*est)

**Large area 4H-SiC power Schottky diode**

**Rang, Toomas; Korolkov, Oleg; Pikkov, Mihhail** Proceedings of the 3rd International Conference and Exhibition Micro Materials : MicroMat2000 : April 17-19, 2000, Berlin, Germany 2000 / p. 890-893

**Large area 4H-SiC power Schottky diode**

**Rang, Toomas; Korolkov, Oleg; Pikkov, Mihhail** Abstracts of the 3rd International Conference and Exhibition Micro Materials : MicroMat2000 : April 17-19, 2000, Berlin, Germany 2000 / p. 303-304

**Large area 6H-SiC Schottky diode**

**Rang, Toomas; Korolkov, Oleg; Pikkov, Mihhail** Proceedings of the Estonian Academy of Sciences. Engineering 2000 / 2, p. 155-159 : ill [https://artikliid.elnet.ee/record=b1004045\\*est](https://artikliid.elnet.ee/record=b1004045*est)

**Large area high quality interfaces to SiC substrates - technology and modelling**

**Rang, Toomas; Korolkov, Oleg; Kurel, Raido; Pikkov, Mihhail** Materials mechanics, fracture mechanics, micro mechanics 1999 / p. 574-579: ill

**Life-time characterization of LEDs**

**Paisnik, Kristo; Rang, Galina; Rang, Toomas** Estonian journal of engineering 2011 / 3, p. 241-251 : ill

**Low noise LDO architecture with consideration for low voltage operation**

**Mihhailov, Juri; Strik, Viktor; Strik, Sergei; Rang, Toomas** BEC 2014 : 2014 14th Biennial Baltic Electronics Conference : proceedings of the 14th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 6-8, 2014, Tallinn, Estonia 2014 / p. 41-44 : ill

**Low power CMOS current source for shortened square wave signals**

**Kasemaa, Argo; Rang, Toomas** BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 89-92 : ill

**Low-cost, portable dual-channel pressure pump for droplet microfluidics**

**Jõemaa, Rauno; Grosberg, Martin; Rang, Toomas; Pardy, Tamas** 2022 45th Jubilee International Convention on Information, Communication and Electronic Technology (MIPRO), 23-27 May 2022, Opatija, Croatia : proceedings 2022 / p. 205-211 : ill <https://doi.org/10.23919/MIPRO55190.2022.9803371>

**Low-temperature annealing of lightly doped n-4H-SiC layers after irradiation with fast electrons**

**Korolkov, Oleg; Kozlovski, Vitali V.; Lebedev, Alexander A.; Sleptšuk, Natalja; Toompuu, Jana; Rang, Toomas** Semiconductors 2019 / p. 975–978 <https://doi.org/10.1134/S1063782619070133> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**LPE technology for power GaAs diode structures**

Voitovitš, Viktor; **Rang, Toomas; Rang, Galina** Estonian journal of engineering 2010 / 1, p. 11-22 : ill

**Lugupeetud TÜ rektor prof. J. Aaviksoo : pöördumine**

Uibu, Jaak; **Roosimaa, Toivo**; Einasto, R.; Vooglaid, Ülo; Tõnstein, A.; Naelapea, A. E.; **Rang, Toomas; Koslov, Vladimir** Sirp 2000 / 20. apr., lk. 20

**Maaelektriku teatmik**

1975 [https://www.ester.ee/record=b1304264\\*est](https://www.ester.ee/record=b1304264*est)

**Majanduskomisjon 2010–2016**

**Rang, Toomas** Uuele kvaliteedile ja vääriskale positsioonile : Tallinna Tehnikaülikool 2000-2015 2018 / lk. 248-263 [http://www.ester.ee/record=b4775778\\*est](http://www.ester.ee/record=b4775778*est) <https://digi.lib.ttu.ee/i/?10910>

**Materials and contact characterisation VIII**

2017 <https://www.witpress.com/books/978-1-78466-197-7>

**Metallization technologies for wide band-gap semiconductor substrates : (invited paper)**

**Rang, Toomas; Korolkov, Oleg; Pikkov, Mihhail** Proceedings of the 6th Nexuspan Workshop Microsystems Technology Activities in Baltic Region : 23-24 April, 1999, Vilnius, Lithuania 1999 / p. 27-30

**Method of samples preparation intended for research of deep centers in i-, n-, and p-layers of GaAs p<sup>+</sup>-pin-n<sup>+</sup> structures and result of analysis**

**Toompuu, Jana; Sleptšuk, Natalja; Korolkov, Oleg; Rang, Toomas** BEC 2016 : 2016 15th Biennial Baltic Electronics Conference : proceedings of the 15th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 3-5, 2016, Tallinn, Estonia 2016 / p. 35-38 : ill [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

**Microheating solution for molecular diagnostics devices = Mikrosoojendamise molekulaardiagnostika seadistes**

**Pardy, Tamas** 2018 <https://digi.lib.ttu.ee/i/?9249> [https://www.ester.ee/record=b4759173\\*est](https://www.ester.ee/record=b4759173*est)

**Mille poolest erineb TTÜ... : [intervjuu Toomas Rangiga]**

**Rang, Toomas** Avaja 2003 / 18. detsember, lk. 2 : fot

**Model-based system architecture for event-triggered wireless control of bio-analytical devices**

**Ashraf, Kanwal; Le Moullec, Yannick; Pardy, Tamas; Rang, Toomas** 2021 24th Euromicro Conference on Digital System Design (DSD), 01-03 September 2021 2021 / p. 465–471 : ill <https://doi.org/10.1109/DSD53832.2021.00076>

**Modeling and simulations of 4H-SiC/6H-SiC/4H-SiC single quantum-well light emitting diode using diffusion bonding technique**

Rashid, Muhammad Haroon; **Koel, Ants; Rang, Toomas** Micromachines 2021 / art. 1499 <https://doi.org/10.3390/mi12121499> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Modeling in semiconductor electronics**

Javor, A.; **Rang, Toomas**; Szekely, V.; Tamay, K.; **Velmre, Enn** 1993 [https://www.ester.ee/record=b1031052\\*est](https://www.ester.ee/record=b1031052*est)

**Modeling in semiconductor electronics**

**Velmre, Enn; Rang, Toomas** BEC : Baltic Electronics Conference : proceedings of the 4th Biennial Conference, October 9-14, 1994, Tallinn (Estonia). 2 1994 / p. 501-516: ill [https://www.ester.ee/record=b2150914\\*est](https://www.ester.ee/record=b2150914*est)

**Modelling and experimental characterisation of self-regulating resistive heating elements for disposable medical diagnostics devices**

**Pardy, Tamas; Rang, Toomas**; Tulp, Indrek Materials characterization VII 2015 / p. 263-271 : ill

**Modelling and experimental characterisation of thermoelectric heating for molecular diagnostics devices**

**Pardy, Tamas; Rang, Toomas**; Tulp, Indrek BEC 2016 : 2016 15th Biennial Baltic Electronics Conference : proceedings of the 15th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 3-5, 2016, Tallinn, Estonia 2016 / p. 27-30 : ill [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

### **Modelling of inhomogeneities of SiC Schottky interfaces**

**Rang, Toomas** Software for Electrical Engineering Analysis and Design V : [Fifth International Conference ... : Electrosoft V] 2001 / p. 3-15 : ill <https://www.witpress.com/Secure/elibrary/papers/ES01/ES01000FU.pdf>

### **Modelling of metal alloy contacts to semiconductor substrate**

**Rang, Toomas** Simulation and design of microsystems and microstructures 1995 / p. 251-258: ill <https://www.witpress.com/Secure/elibrary/papers/MIC95/MIC95030FU.pdf>

### **Modelling of the tunneling current in metal alloy contacts to 6H- and 4H-SiC substrates**

**Rang, Toomas** MICROSIM II : simulation and design of microsystems and microstructures 1997 / p. 23-31 : ill

### **Nano- and Micro-Scale simulations of Ge/3C-SiC and Ge/4H-SiC NN-heterojunction diodes**

**Rashid, Muhammad Haroon; Koel, Ants; Rang, Toomas** Silicon Carbide and Related Materials 2019 : 18th International Conference on Silicon Carbide and Related Materials 2019 (ICSCRM 2019), Kyoto, Japan, September 29 - October 4, 2019 Materials science forum 2020 / p. 490-496 <https://doi.org/10.4028/www.scientific.net/MSF.1004.490> [Conference proceedings at Scopus](#) [Article at Scopus](#)

### **Nano and micro-scale simulations of Si/4H-SiC and Si/3C-SiC NN-heterojunction diodes**

**Rashid, Muhammad Haroon; Koel, Ants; Rang, Toomas** Silicon Carbide and Related Materials 2018 : 12th European Conference on Silicon Carbide and Related Materials (ECSCRM 2018) : Selected, peer reviewed papers from the European Conference on Silicon Carbide and Related Materials (ECSCRM 2018), September 2-6, 2018, Birmingham, UK 2019 / p. 357-361 <https://doi.org/10.4028/www.scientific.net/MSF.963.357> [Conference proceeding at Scopus](#) [Article at Scopus](#)

### **Nanoscale and microscale simulations of N-N junction heterostructures of 3C-4H silicon carbide**

**Rashid, Muhammad Haroon; Koel, Ants; Rang, Toomas; Gähwiler, Reto; Grosberg, Martin; Jõemaa, Rauno** Materials and contact characterisation VIII 2017 / p. 235-248 : ill <https://doi.org/10.2495/MC170241> [Conference proceedings at Scopus](#) [Article at Scopus](#)

### **New interdisciplinary master program in communicative electronics at Tallinn University of Technology**

**Rang, Toomas; Sleptšuk, Natalja** 5th International Conference on Interdisciplinarity in Education ICIE'10 : New Higher Education Programs, June 17-19, 2010, Tallinn, Estonia : proceedings 2010 / p. 187-190 : ill

### **Non-destructive eddy current measurements for silicon carbide heterostructure analysis**

**Sahakyan, Armen; Koel, Ants; Rang, Toomas** Materials and contact characterisation VIII 2017 / p. 49-60 : ill <https://doi.org/10.2495/MC170061> [Conference proceedings at Scopus](#) [Article at Scopus](#)

### **Numerical analysis of the influence of deep energy level traps in SiC Schottky structures**

**Koel, Ants; Rang, Toomas; Rang, Galina** High performance structure and materials. VI 2012 / p. 439-448 : ill

### **Numerical simulation of P-type Al/4H-SiC Schottky barrier diodes [Online resource]**

**Ziko, Mehadi Hasan; Koel, Ants; Rang, Toomas** BEC 2018 : 2018 16th Biennial Baltic Electronics Conference (BEC) : proceedings of the 16th Biennial Baltic Electronics Conference, October 8-10, 2018 2018 / 4 p.: ill <https://doi.org/10.1109/BEC.2018.8600976>

### **Numerical simulations for reverse recovery process investigations of LPE GaAs power diodes**

**Koel, Ants; Rang, Toomas; Voitovitš, Viktor; Toompuu, Jana** BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 39-42 : ill

### **Numerical study of current crowding phenomenon in complementary 4H-SiC JBS rectifiers**

**Rang, Toomas; Higelin, G.; Kurel, Raido** Silicon Carbide and Related Materials 2003 2004 / p. 1045-1048 <https://www.scientific.net/MSF.457-460.1045>

### **Numerical study of turn-off phenomenon in complementary 4H-SiC JBS rectifiers**

**Rang, Toomas; Kurel, Raido; Higelin, G.** BEC 2004 : proceedings of the 9th Biennial Baltic Electronics Conference : October 3-6, 2004, Tallinn, Estonia 2004 / p. 47-50 : ill

### **Numerical two-carrier simulation of the M-S (Schottky) structures**

**Rang, Toomas** Research report : System Theory Laboratory of Electrical Engineering, University of the Saarland 1985 / s. 62

### **Näidisülesanded. Test : abimaterjal ainele "Mikroelektronika"**

2003 [http://www.ester.ee/record=b1766976\\*est](http://www.ester.ee/record=b1766976*est)

### **Odavaid LEDe tasub vältida : [TTÜ Thomas Johann Seebecki elektroonikainstituudis võeti luubi alla valgusdiodide ehk LEDide karakteristikud, tulemusi tutvustab instituudi direktor professor Toomas Rang]**

**Rang, Toomas;** Aru, Erik Mentel et Manu 2012 / lk. 8 : fot [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

### **One-dimensional numerical simulation of complementary power Schottky structures**

Rang, Toomas IEE proceedings. Part I Solid-state and electron devices 1985 / p. 253-256

### **Open source hardware cost-effective imaging sensors for high-throughput droplet microfluidic systems**

Pärnamets, Kaiser; Koel, Ants; Pardy, Tamas; Rang, Toomas Proceedings of 26th International Conference : ELECTRONICS 2022 2022 / 6 p <https://doi.org/10.1109/IEEECONF55059.2022.9810383>

### **Optical detection methods for high-throughput fluorescent droplet microflow cytometry**

Pärnamets, Kaiser; Pardy, Tamas; Koel, Ants; Rang, Toomas; Scheler, Ott; Le Moullec, Yannick; Afrin, Fariha

Micromachines 2021 / art. 345, 20 p. : ill <https://doi.org/10.3390/mi12030345> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Optical dynamics of copper-doped cadmium sulfide (CdS) and zinc sulfide (ZnS) quantum-dots core/shell nanocrystals**

Rashid, Muhammad Haroon; Koel, Ants; Rang, Toomas; Nasir, Nadeem; Sabir, Nadeem; Ameen, Faheem; Rasheed, Abher

Nanomaterials 2022 / art. 2277 <https://doi.org/10.3390/nano12132277> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Panus eilsele teeb homme töötuks**

Rang, Toomas Luup 1999 / 9, lk. 24-26 [https://artiklid.elnet.ee/record=b2091983\\*est](https://artiklid.elnet.ee/record=b2091983*est)

### **A parametric framework for modelling of bioelectrical signals = Parameetiline raamistik bioelektriliste signaalide modelleerimiseks**

Muhammad, Yar 2015 [http://www.ester.ee/record=b4473232\\*est](http://www.ester.ee/record=b4473232*est)

### **A parametric framework for the development of bioelectrical applications : application to a bio-impedance signal simulator**

Muhammad, Yar; Annus, Paul; Le Moullec, Yannick; Rang, Toomas Proceedings of the Estonian Academy of Sciences 2016 /

p. 345-357 : ill <https://doi.org/10.3176/proc.2016.4.03> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Parametric simulation of SiC Schottky JBC structures**

Rang, Toomas; Kurel, Raido Computer methods and experimental measurements for surface effects and contact mechanics VIII 2007 / p. 315-334 <https://www.witpress.com/Secure/elibrary/papers/SECM07/SECM07030FU1.pdf>

### **Phenol and methanol detector based on pristine graphene nano-sheet: a first principles study [Online resource]**

Rashid, Muhammad Haroon; Koel, Ants; Rang, Toomas BEC 2018 : 2018 16th Biennial Baltic Electronics Conference (BEC) :

proceedings of the 16th Biennial Baltic Electronics Conference, October 8-10, 2018 2018 / 4 p. : ill

<https://doi.org/10.1109/BEC.2018.8600982>

### **Physics related modeling of power LEDs**

Paisnik, Kristo; Poppe, Andras; Rang, Toomas; Rang, Galina BEC 2012 : 2012 13th Biennial Baltic Electronics Conference :

proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 57-60 : ill

### **PID controller tuning optimization using genetic algorithm for droplet size control in microfluidics**

Gyimah, Nafisat; Jõemaa, Rauno; Pärnamets, Kaiser; Scheler, Ott; Rang, Toomas; Pardy, Tamas 2022 18th Biennial Baltic

Electronics Conference (BEC) 2022 / 6 p <https://doi.org/10.1109/BEC56180.2022.9935596>

### **Plaan 3000Pluss**

Rang, Toomas Mente et Manu 2010 / lk. 3 : fot [https://artiklid.elnet.ee/record=b2286893\\*est](https://artiklid.elnet.ee/record=b2286893*est)

### **Poleemiline järelsõna**

Rang, Toomas Mente et Manu 2004 / 30. märts, lk. 2 [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

### **Polymer nanofiber deposition in lab-on-a-chip devices by electrospinning**

Pardy, Tamas; Jõemaa, Rauno; Ender, Ferenc; Rang, Toomas; Hegedus, Kristof; Balogh-Weiser, Diana 2020 17th Biennial

Baltic electronics conference, Tallinn, Estonia, October 6-8, 2020 : proceedings 2020 / 4 p. : ill

<https://doi.org/10.1109/BEC49624.2020.9277494>

### **Polytypic heterojunctions for wide bandgap semiconductor materials**

Shenkin, Mikhail; Korolkov, Oleg; Rang, Toomas; Rang, Galina Materials characterization VII 2015 / p. 273-282 : ill

### **Pooljuhtstruktuuride tööpõhimõtted. Struktuuride realisatsioonid kristallis : abimaterjal ainele "Mikroelektronika"**

2003 [http://www.ester.ee/record=b1782563\\*est](http://www.ester.ee/record=b1782563*est)

### **Power Stage MOSFETs Segmentation in Ripple Controlled Step-Down SMPS [Online resource]**

**Mihhailov, Juri**; Koort, Marko; **Rang, Toomas** BEC 2018 : 2018 16th Biennial Baltic Electronics Conference (BEC) : proceedings of the 16th Biennial Baltic Electronics Conference, October 8-10, 2018 2018 / 4 p. : ill <https://doi.org/10.1109/BEC.2018.8600960>

#### **Precision engineering and mechatronics trends in Estonia**

**Ajaots, Maido; Rang, Toomas; Tamre, Mart** NordDesign'96 : 28.-30.8.1996, Helsinki University of Technology, Espoo, Finland : proceedings 1996 / p. 289-296: ill

#### **Preliminary investigation of diffusion welded contacts to p-type 6H-SiC**

**Korolkov, Oleg; Rang, Toomas**; Kuznetsova, Natalja; Ruut, Jana BEC 2002 : proceedings of the 8th Biennial Baltic Electronics Conference : October 6-9, 2002, Tallinn, Estonia 2002 / p. 55-56 : ill

#### **Principles of semiconductor structures. Realisation of structures in crystals : supplementary lecture material in the subject "Microelectronics"**

**Rang, Toomas** 2003 [http://www.ester.ee/record=b1782565\\*est](http://www.ester.ee/record=b1782565*est)

#### **Process development for 3D laser lithography**

Kaste, N.; Filbert, A.; Mescheder, U.; **Rang, Toomas; Rang, Galina** High performance and optimum design of structures and materials 2014 / p. 139-150 : ill <https://doi.org/10.2495/HPSM140131> [Conference proceedings at Scopus](#) [Article at Scopus](#)

#### **Processing unit for alcohol sensor**

**Kasemaa, Argo; Rang, Toomas** Proceedings of the Conference Electronics'98, 19-20 May 1998, Kaunas, Lithuania 1998 / p. 22-23

#### **Product and manufacturing in electronics : supplementary material in the subject "Technologies of electronic circuits"**

**Rang, Toomas** 2003 [https://www.ester.ee/record=b1766953\\*est](https://www.ester.ee/record=b1766953*est)

#### **Pungi-, roki- või diskotaat : [Riho Baumannist tema enda, Olavi Pihlamäe ja Toomas Rangi kommentaaridega]**

Rebane, Selene-Rete; **Pihlamägi, Olavi; Rang, Toomas** Üliõpilasleht 2003 / lk. 2 : ill

#### **Pöördumine Haridus- ja Teadusministri ning Riigikogu kultuurikomisjoni esimehe poole : [doktorikoolide probleemist]**

**Arro, Ilmar; Kaljurand, Mihkel; Kallavus, Urve; Kübarsepp, Jakob; Lille, Ülo; Lopp, Margus; Mellikov, Enn; Min, Mart; Rang, Toomas; Rüstern, Ennu; Taklaja, Andres; Tamm, Toomas; Tammet, Tanel; Tepandi, Jaak; Ubar, Raimund-Johannes; Öpik, Andres** Mente et Manu 2005 / 18. mai. lk. 1 [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

#### **Pöördumine Haridus- ja Teadusministri ning Riigikogu kultuurikomisjoni esimehe poole : [doktorikoolide probleemist]**

**Arro, Ilmar; Kaljurand, Mihkel; Kallavus, Urve; Kübarsepp, Jakob; Lille, Ülo; Lopp, Margus; Mellikov, Enn; Min, Mart; Rang, Toomas; Rüstern, Ennu; Taklaja, Andres; Tamm, Toomas; Tammet, Tanel; Tepandi, Jaak; Ubar, Raimund-Johannes; Öpik, Andres** Tallinna Tehnikaülikooli aastaraamat 2005 2006 / lk. 430-431

#### **Rahvusvaheline Seebecki foorum Tallinnas : [20.-24. mail 2013]**

**Rang, Toomas** Tallinna Tehnikaülikooli aastaraamat 2013 2014 / lk. 303-304

#### **Relative complex permittivity and its dependence on frequency**

**Giannoukos, Georgios; Min, Mart; Rang, Toomas** World journal of engineering 2017 / p. 532-537 : ill <https://doi.org/10.1108/WJE-01-2017-0007> [Journal metrics at Scopus](#) [Article at Scopus](#)

#### **Ränikarbiidil põhinevate jõupooljuhtseadiste disain ja karakteriseerimine**

**Rang, Toomas; Rang, Galina** Teadusmõtte Eestis. 4, Tehnikateadused. 2 2007 / lk. 121-131 : ill

#### **Self-heating phenomenon and current suppressing effect at 6H-SiC Schottky interfaces**

**Kurel, Raido; Rang, Toomas** Proceedings of the 5th NEXUSPAN Workshop on Thermal Aspects in Microsystem Technology, 6-8 May 1998, Budapest, Hungary 1998 / p. 88-91 <https://www.witpress.com/elibrary/wit-transactions-on-engineering-sciences/22/5010>

#### **Self-heating phenomenon and current suppressing effect at the SiC Schottky interfaces**

**Rang, Toomas; Kurel, Raido** Software for electrical engineering analysis and design. IV 1999 / p. 153-162: ill <https://www.witpress.com/elibrary/wit-transactions-on-engineering-sciences/22/5010>

#### **Semiconductor based alcohol sensing element**

**Rang, Toomas; Kasemaa, Argo** Proceedings of the 6th Nexuspan Workshop Microsystems Technology Activities in Baltic Region : 23-24 April, 1999, Vilnius, Lithuania 1999 / p. 82-84

#### **SiC JBS diode symmetrical voltage doubler represented as the diffusion-welded stack**

**Korolkov, Oleg; Land, Raul; Toompuu, Jana; Sleptšuk, Natalja; Rang, Toomas** Silicon carbide and related materials 2017 : ICSCRM 2017 : selected, peer reviewed papers from the 2017 International Conference on Silicon Carbide and related materials, September 17-22, 2017, Washington, DC, USA 2018 / p. 862-865 : ill <https://doi.org/10.4028/www.scientific.net/MSF.924.862> [Conference](#)

**SiC Schottky diode for power converters**

**Pikkov, Mihhail; Rang, Toomas** PEDC 2001 : Power Electronics Devices Compatibility : 2nd conference : 3-5 September 2001, Zielona Gora, Poland 2001 / p. 156-161 : ill

**SiC Schottky diode for use in power convertors**

**Pikkov, Mihhail; Rang, Toomas; Pokatilov, Andrei** BEC 2006 : 2006 International Baltic Electronics Conference : Tallinn University of Technology, October 2-4, 2006, Tallinn, Estonia : proceedings of the 10th Biennial Baltic Electronics Conference 2006 / p. 245-246 : ill

**SIC schottky diode rectifier bridge represented as the diffusion-welded stack**

**Korolkov, Oleg; Kozlovski, Vitali V.; Lebedev, Alexander A.; Land, Raul; Sleptšuk, Natalja; Toompuu, Jana; Rang, Toomas** Silicon Carbide and Related Materials 2016 : selected, peer reviewed papers from the 11th European Conference on Silicon Carbide and Related Materials 2016 (ECSCRM 2016), September 25-29, 2016, Halkidiki, Greece 2017 / p. 697-700 : ill  
<https://doi.org/10.4028/www.scientific.net/MSF.897.697> [Conference proceedings at Scopus Article at Scopus](#)

**SIC schottky diode rectifier bridge represented as the diffusion-welded stack**

**Korolkov, Oleg; Land, Raul; Sleptšuk, Natalja; Toompuu, Jana; Rang, Toomas** 11th European Conference on Silicon Carbide and Related Materials : September 25-29, 2016, Porto Carras Grand Resort, Halkidiki, Greece : [poster session] 2016 / p. 42

**SiC и GaAs диоды в устройствах силовой электроники**

**Blinov, Andrei; Vinnikov, Dmitri; Rang, Toomas** Технічна електродинаміка : тематичний випуск : силова електроніка та енергоефективність 2012 / с. 42-46 : ил

**Silicon carbide - new challenge for power semiconductor devices**

**Rang, Toomas; Rang, Galina** 2nd International Symposium "Topical Problems of Education in the Field of Electrical and Power Engineering" : Kuressaare, Estonia, January 17-22, 2005 2005 / p. 36-42 : ill

**Silicon integrated circuit fabrication process modeling and simulation**

**Rang, Toomas; Tamay, K.; Mizsei, Janos** Periodica polytechnica. Electrical engineering = Электротехника 1980 / p. 109-113  
[https://www.ester.ee/record=b1198855\\*est](https://www.ester.ee/record=b1198855*est)

**Silicon planar technology process modeling**

**Rang, Toomas; Tamay, K.; Masszi, F.** Test methods in electronics technology : third International Spring Seminar on Electronics Technology, May 15-18, 1979, Balatonfüred, Hungary 1979 / p. 110-120

**Simple relationship between the breakdown voltage, concentration and junction depth pn diffused junctions**

**Rang, Toomas** Physica status solidi. A, Applied research 1982 / p. K117-K119 : tab., joon [https://www.ester.ee/record=b1562026\\*est](https://www.ester.ee/record=b1562026*est)

**Simulation of deep energy traps to explain the VAC temperature dependence anomaly of diffusion welded Schottky contacts**

**Koel, Ants; Rang, Toomas; Rang, Galina** ICSCRM2011 : Cleveland Ohio, USA, September 11-16, 2011 : abstracts 2011 / p. 340 : ill

**Simulations of benzene and hydrogen-sulfide gas detector based on single-walled carbon nanotube over intrinsic 4H-SiC substrate**

**Rashid, Muhammad Haroon; Koel, Ants; Rang, Toomas; Ziko, Mehadi Hasan** Micromachines 2020 / art. 453, 13 p. : ill  
<https://doi.org/10.3390/mi11050453> [Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS](#)

**Simulations of graphene nanoribbon field effect transistor for the detection of propane and butane gases : a first principles study**

**Rashid, Muhammad Haroon; Koel, Ants; Rang, Toomas** Nanomaterials 2020 / art. 98 <https://doi.org/10.3390/nano10010098>  
[Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS](#)

**Simulations of heterostructures based on 3C-4H and 6H-4H silicon carbide polytypes**

**Rashid, Muhammad Haroon; Koel, Ants; Rang, Toomas** Silicon carbide and related materials 2017 : ICSCRM 2017 : selected, peer reviewed papers from the 2017 International Conference on Silicon Carbide and related materials, September 17-22, 2017, Washington, DC, USA 2018 / p. 302-305 : ill <https://doi.org/10.4028/www.scientific.net/MSF.924.302> [Conference Proceedings at Scopus Article at Scopus](#)

**Simulations of propane and butane gas sensor based on pristine armchair graphene nanoribbon**

**Rashid, Muhammad Haroon; Koel, Ants; Rang, Toomas** IOP conference series : materials science and engineering 2018 / art. 012001, 8 p <https://doi.org/10.1088/1757-899X/362/1/012001> [Conference proceedings at Scopus Article at Scopus Article at WOS](#)

**A smart capless voltage regulator for very high bandwidth A/D and D/A converters in a standard 28nm CMOS process**

**Kampus, Vahur; Rang, Toomas** BEC 2016 : 2016 15th Biennial Baltic Electronics Conference : proceedings of the 15th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 3-5, 2016, Tallinn, Estonia 2016 / p. 43-46 : ill [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

**Some comparative properties of diffusion-welded contacts to 6H and 4H silicon carbide**

**Korolkov, Oleg; Rang, Toomas** Silicon Carbide and Related Materials 2001 : ICSCRM2001 : proceedings of the International Conference on Silicon Carbide and Related Materials 2001, Tsukuba, Japan, October 28 - November 2, 2001. Part 2 2002 / p. 941-944 : ill

**Some of comparative properties of diffusion welded contacts to 6H- and 4H-silicon carbide**

**Korolkov, Oleg; Rang, Toomas** International Conference on Silicon Carbide and Related Materials 2001 - ICSCRM2001 - October 28-November 2, 2001 (Epochal Tsukuba, Ibaraki, Japan) : technical digest 2001 / p. 625-626 : ill [https://www.researchgate.net/publication/250340293\\_Some\\_Comparative\\_Properties\\_of\\_Diffusion-Welded\\_Contacts\\_to\\_6H\\_and\\_4H\\_Silicon\\_Carbide](https://www.researchgate.net/publication/250340293_Some_Comparative_Properties_of_Diffusion-Welded_Contacts_to_6H_and_4H_Silicon_Carbide)

**Szilicium planar technologiai eljárás számítógépes stimulációja**

**Rang, Toomas; Tamay, K.; Masszi, F.** Finommechanika, mikrotechnika: az Optikai, Akusztikai és Filmtechnikai Egyesület, a Híradástechnikai Tudományos Egyesület és a Méréstechnikai és Automatizálási Tudományos Egyesület lapja 1979 / p. 257-260

**Static and dynamic behavior of the SiC complementary JBS structures**

**Kurel, Raido; Rang, Toomas** BEC 2006 : 2006 International Baltic Electronics Conference : Tallinn University of Technology, October 2-4, 2006, Tallinn, Estonia : proceedings of the 10th Biennial Baltic Electronics Conference 2006 / p. 59-62 : ill

**Status quo in Estonian electronics industry?**

**Rang, Toomas; Tamm, Uljas** BEC : Baltic Electronics Conference : proceedings of the 4th Biennial Conference, October 9-14, 1994, Tallinn (Estonia). 2 1994 / p. 585-591: ill [https://www.ester.ee/record=b2150914\\*est](https://www.ester.ee/record=b2150914*est)

**Steady state analysis of the commutating LC filter based dual active bridge for the isolation stage of power electronic transformer [Electronic resource]**

**Beldjajev, Viktor; Rang, Toomas; Zakis, Janis** CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 138-143 : ill [CD-ROM]

**Study of surface defects in 4H-SiC Schottky diodes using a scanning Kelvin probe**

Mizsei, Janos; **Korolkov, Oleg; Toompuu, Jana; Rang, Toomas** The 9th European Conference on Silicon Carbide and Related Materials : abstract book : St. Petersburg Russia, 2-6 September, 2012 2012 / 2 p. : ill

**Study of surface defects in 4H-SiC Schottky diodes using a scanning Kelvin probe**

Mizsei, Janos; **Korolkov, Oleg; Toompuu, Jana; Mikli, Valdek; Rang, Toomas** Silicon Carbide and Related Materials 2012 : selected peer reviewed papers from the 9th European Conference on Silicon Carbide and Related Materials (ECSCRM 2012), September 2-6, 2012, St. Petersburg, Russian Federation 2013 / p. 677-680 : ill <https://doi.org/10.4028/www.scientific.net/MSF.740-742.677> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Conference Proceedings at WOS](#) [Article at WOS](#)

**Subcontact layers in LPE structures for forming the ohmic contacts on GaAs semiconductor substrates**

**Korolkov, Oleg; Voitovitš, Viktor; Rang, Toomas** Abstract book of 13th American Conference on Crystal Growth and Epitaxy : August 12-16, 2001, Burlington, Vermont, USA 2001 / p. 133

**Sulle, abiturient! : Üliõpilaste vastuvõtt 1991. a**

**Rang, Toomas** Tehnikaülikool 1991 / 25. apr., lk. 1-2

**Tallinna Tehnikaülikool ja Elcoteq Tallinn AS elektroonikainseneride ettevalmistuse ühisrindel**

**Rang, Toomas** Elektroonika 2000 : VII rahvusvahelise telekommunikatsioonipäeva konverentsi ettekannete materjalid 2000 / lk. 19-20 [https://www.ester.ee/record=b1399956\\*est](https://www.ester.ee/record=b1399956*est)

**Tartu dioditegija trügib ainulaadse tehnoloogiaga maailmaturule : [firma Clifton nõukogu liikme Toomas Rangi kommentaariga]**

Paris, Krister; Aru, Erik; **Rang, Toomas** Põhjarannik 2005 / 23. märts, Ärileht, lk. 3

**Tehnikateadused. Elektrotehnika**

**Rang, Toomas** Eesti entsüklopeedia. 11, Eesti üld 2002 / lk. 500

**Tehnikaülikool võitis EL hanke eurode tuvastamiseks : [intervjuu TTÜ elektroonikainstituudi direktori Toomas Rangiga ja professor Mart Min'iga]**

**Rang, Toomas; Ummelas, Mart; Min, Mart** Mente et Manu 2008 / 30. jaan., lk. 3 [https://artiklid.elnet.ee/record=b1118469\\*est](https://artiklid.elnet.ee/record=b1118469*est)

**Tehnikaülikooli rektori järjekordsed valimised, ehk, Kuidas paistavad järgmise rektori ülesanded "altpoolt" vaadatuna**  
**Rang, Toomas** Tehnikaülikool 1999 / 22. nov., lk. 4-7: portr



**Temperature effects in alloy metal and 6H-SiC substrate Schottky contacts caused by the current suppressing effect**  
**Rang, Toomas**; Blum, Alfons Proceedings of the International Conference and Exhibition Micro Materials : MicroMat '97, April 16-18, 1997, Berlin, Germany 1997 / p. 591-596

**Temperature influence on current suppressing effect in SiC Schottky diode**  
**Kurel, Raido; Rang, Toomas** Abstracts of the 3rd International Conference and Exhibition Micro Materials : MicroMat2000 : April 17-19, 2000, Berlin, Germany 2000 / p. 217-218

**Temperature influence on current suppressing effect in SiC Schottky diode**  
**Kurel, Raido; Rang, Toomas** Proceedings of the 3rd International Conference and Exhibition Micro Materials : MicroMat2000 : April 17-19, 2000, Berlin, Germany 2000 / p. 1208-1209

**The 7th Biennial Conference on Electronics and Microsystem Technology "Baltic Electronics Conference" : BEC 2000 : October 8 - 11, 2000, Tallinn, Estonia : conference proceedings**  
**Rang, Toomas** 2000 [https://www.ester.ee/record=b2150914\\*est](https://www.ester.ee/record=b2150914*est)

**The basic parameters of diffusion welded Al Schottky contacts to p- and n-SiC**  
**Korolkov, Oleg**; Ruut, Jana; Kuznetsova, Natalja; **Rang, Toomas** Silicon Carbide and Related Materials 2003 2004 / p. 857-860  
<https://doi.org/10.4028/www.scientific.net/MSF.457-460.857>

**The basic Schottky parameters for combined diffusion welded and sputter metal contacts**  
**Kuznetsova, Natalja; Korolkov, Oleg; Rang, Toomas; Pikkov, Mihhail** BEC 2006 : 2006 International Baltic Electronics Conference : Tallinn University of Technology, October 2-4, 2006, Tallinn, Estonia : proceedings of the 10th Biennial Baltic Electronics Conference 2006 / p. 47-50 : ill

**The d.c. modeling of PL with the non-linear circuit analysis program TRANZ-TRAN**  
**Rang, Toomas** Periodica polytechnica. Electrical engineering = Электротехника 1981 / p. 103-114 : joon  
[https://www.ester.ee/record=b1198855\\*est](https://www.ester.ee/record=b1198855*est) <https://pp.bme.hu/ee/article/view/4771/3876>

**The dependence of reverse recovery time on barrier capacitance and series on-resistance in Schottky diodes**  
**Veher, Oleksandr; Sleptšuk, Natalja; Toompuu, Jana; Korolkov, Oleg; Rang, Toomas** Materials and contact characterisation VIII 2017 / p. 15-22 : ill <https://doi.org/10.2495/MC170021> [Conference proceedings at Scopus](#) [Article at Scopus](#)

**The electrotechnical and electronics industry**  
**Rang, Toomas** Technology policy for improving competitiveness of Estonian industries 1996 / p. 60-65

**The measurement and tuning of SiC diode voltage doubler represented as diffusion-welded stack [Online resource]**  
**Toompuu, Jana; Sleptšuk, Natalja; Land, Raul; Korolkov, Oleg; Rang, Toomas** BEC 2018 : 2018 16th Biennial Baltic Electronics Conference (BEC) : proceedings of the 16th Biennial Baltic Electronics Conference, October 8-10, 2018 2018 / 4 p.: ill  
<https://doi.org/10.1109/BEC.2018.8600963>

**The permeable base transistor**  
Koel, Ants; Nilsson, H.H.; Masszi, F.; **Rang, Toomas** BEC'98 : the 6th Biennial Conference on Electronics and Microsystems Technology, October 7-9, 1998, Tallinn, Estonia : proceedings 1998 / p. 287-290: ill

**The Schottky parameter test for combined diffusion welded and sputter large area contacts**  
**Korolkov, Oleg; Kuznetsova, Natalja; Rang, Toomas; Syrkin, A.; Dmitriev, V.** Silicon carbide and related materials 2007 / p. 737-740 <https://www.scientific.net/MSF.556-557.737>

**The specificity of solid-phase interaction of aluminium with silicon carbide in the manufacture of diffusion-welded contacts to semiconductor devices**  
**Sleptšuk, Natalja; Korolkov, Oleg; Toompuu, Jana; Rang, Toomas; Mikli, Valdek** Elektronika ir elektrotehnika = Electronics and electrical engineering 2012 / p. 45-48 : ill <https://eejournal.ktu.lt/index.php/elt/article/view/2610>

**Thermal analysis of a disposable, instrument-free DNA amplification lab-on-a-chip platform**  
**Pardy, Tamas; Rang, Toomas**; Tulp, Indrek Sensors 2018 / art. 1812, 13 p. : ill <https://doi.org/10.3390/s18061812> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Toode ja tootmine elektroonikas : abimaterjal ainele "Elektroonikaskeemide tehnoloogiad"**  
2003 [http://www.ester.ee/record=b1766950\\*est](http://www.ester.ee/record=b1766950*est)

**TRANZ-TRAN : mittelineaarsete skeemide analüüsi programm : kasutusjuhend**  
1983 [https://www.ester.ee/record=b1255945\\*est](https://www.ester.ee/record=b1255945*est)

**TRANZ-TRAN mittelineaarsete skeemide analüüsi programm : kasutusjuhend**

1986 [https://www.ester.ee/record=b1205915\\*est](https://www.ester.ee/record=b1205915*est)

**TRANZ-TRAN mittelineaarsete skeemide analüüsi programm : mudelite kirjeldus ja parameetrite määramine**

1986 [https://www.ester.ee/record=b1205916\\*est](https://www.ester.ee/record=b1205916*est)

**Tunne kolleegi. Enn Velmre : [intervjuu Enn Velmrega]**

**Velmre, Enn; Rang, Toomas; Haldre, Eero; Oras, Anne; Min, Mart** Avaja 2003 / lk. 3 : fot

**Two dimensional modeling of the shunted emitter area for power shepistors**

**Rang, Toomas; Saul, Indrek** Modeling, Simulation and Control 1989 / p. 29-39

**Two dimensional modelling of alloy metal Schottky contacts to 6H-SiC substrate**

**Rang, Toomas; Blum, Alfons** Proceedings of the ELECTROSOFT 96, May 28-30, San-Miniato, Italy 1996 / p. 347-356

**Vaimust, võimust, traditsioonidest ja internetipõhisest õppest: oma mõtteid ja laenatud tarkust**

**Rang, Toomas** Mente et Manu 2004 / 27. jaan., 10. veebr., 20. veebr., 9. märts, lk. 2 [https://artiklid.elnet.ee/record=b1341909\\*est](https://artiklid.elnet.ee/record=b1341909*est)

**Vanamoodi enam ei saa, uutmoodi veel ei oska**

**Rang, Toomas** Profit 2005 / 4, lk. 22 : portr

**Võta või jäta!**

**Rang, Toomas** Mente et Manu 2010 / lk. 2 : fot. ; 12. veebr., lk. 3 : fot [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

**Väikesed interpretatsioonid pärastlõunaks**

**Rang, Toomas** A & A 2004 / 3, lk. 4-6 [https://artiklid.elnet.ee/record=b1015743\\*est](https://artiklid.elnet.ee/record=b1015743*est)

**Ökonoomsete negatiivse diferentsiaalaktistusega astmete ja elementide disainimine ja optimeerimine**

**Taniilo, Rainer** 2005 [https://www.ester.ee/record=b2073482\\*est](https://www.ester.ee/record=b2073482*est)

**Überblick der Situation in der Deutschen Elektronik- und Informatikindustrie**

**Rang, Toomas** Automation, simulation & measurement : ASM'91 : 3rd biennial conference, Tallinn, October 7-11, 1991. Section S / Tallinn Technical University 1992 / S. 11-25: III

**Ülikool ootab ettevõtlikust, efektiivsust ja edukust**

**Rang, Toomas** Mente et Manu 2015 / lk. 8-9 : fot [https://artiklid.elnet.ee/record=b2725557\\*est](https://artiklid.elnet.ee/record=b2725557*est)

**Ülikool vajab jõulist juhtimist : intervjuu TTÜ elektroonikainstituudi direktori professor Toomas Rangiga**

**Rang, Toomas** Mente et Manu 2010 / lk. 1, 3 : fot

**Аналитико-численная модель для исследования стационарного непроводящего состояния силовых тиристорov**

**Velmre, Enn; Rang, Toomas** Расчет и проектирование измерительных преобразователей 1983 / с. 57-67

**Зависимость подвижности электронов и дырок от температуры и концентрации примеси в кремнии**

**Rang, Toomas; Velmre, Enn** Анализ и моделирование технических устройств и систем АСУТП 1977 / с. 115-120 : илл [https://www.ester.ee/record=b2190987\\*est](https://www.ester.ee/record=b2190987*est) <https://digikogu.taltech.ee/et/Item/b7c66054-0b4f-4684-9453-442bc7e6e200>

**Инженерное обеспечение САПР элементов РЭА**

**Rang, Toomas** Численные методы и средства проектирования и испытания элементов РЭА : тезисы докладов. Том 1 1987 / с. 13-23 : ил [https://www.ester.ee/record=b1273986\\*est](https://www.ester.ee/record=b1273986*est)

**К расчету максимального напряжения переключения р-п-р-структуры**

**Velmre, Enn; Rang, Toomas** Анализ и моделирование технических устройств и систем АСУТП 1977 / с. 121-126 : илл [https://www.ester.ee/record=b2190987\\*est](https://www.ester.ee/record=b2190987*est) <https://digikogu.taltech.ee/et/Item/b7c66054-0b4f-4684-9453-442bc7e6e200>

**Компараторы с обратной связью**

**Gallai, S.; Rang, Toomas** Машинное проектирование электронных устройств и систем 1988 / с. 92-104

**Комплексный подход к системам проектирования элементов полупроводниковой и интегральной электроники**

**Rang, Toomas** Машинное проектирование электронных устройств и систем 1988 / с. 149-165

**Козэффициентное ударное ионизации носителей заряда в <100> арсениде галлия**

**Rang, Toomas; Puusepp, Märt** Электронная техника. Серия 2, Полупроводниковые приборы : научно-технический сборник 1987 / с. 98-100 [https://www.ester.ee/record=b2160501\\*est](https://www.ester.ee/record=b2160501*est)

**Критические параметры эквивалентных моделей полупроводниковых приборов**  
**Rang, Toomas** Моделирование и управление в системах технической кибернетики 1987 / с. 72-76

**Лавинное размножение носителей в кремниевых арсенид-галлиевых и фосфинидиновых дополнительных PN-переходах**  
**Rang, Toomas; Velmre, Enn** Расчет и проектирование систем технической кибернетики 1984 / с. 3-13

**Машинное моделирование цепи питания, обеспечивающей инжекторный ток для И<sup>2</sup>Л схем**  
**Rang, Toomas** Расчет и проектирование приборов, устройств и систем технической кибернетики 1981 / с. 15-19

**Моделирование концентрации носителей заряда в полупроводниках**  
**Rang, Toomas** Исследования по прикладной квантовой электронике 1987 / с. 26-36

**Моделирование логических элементов для программы нелинейного анализа съём ТРАНЗ-ТРАН**  
Naabu, T.; Rang, Toomas XXVIII студенческая научно-техническая конференция вузов Белоруссии, Молдавии, Эстонии, Латвии, Литвы, 3-5 апр. 1984. Ч. 1, Общественные науки, физико-математические науки, химия, приборостроение, радиотехника и электроника, робототехника и гибкие автоматизированные производства : тезисы докладов 1984 / с.28  
[https://www.ester.ee/record=b3913283\\*est](https://www.ester.ee/record=b3913283*est)

**Моделирование подвижностей носителей. 1, Рассеивание на акустических фонах и на нейтральной и ионизированной примеси**  
**Rang, Toomas** Анализ и синтез сложных систем и цепей с помощью ЭВМ 1986 / с. 103-116

**Моделирование подвижностей носителей. 2, Рассеивание на носителях и поверхности, эффект насыщения дрейфовой скорости носителей**  
**Rang, Toomas** Анализ и синтез сложных систем и цепей с помощью ЭВМ 1986 / с. 117-130

**Моделирование технологического процесса кремниевых силовых полупроводниковых приборов на ЭВМ**  
**Rang, Toomas; Velmre, Enn** Синтез и диагностика цифровых устройств и систем 1982 / с. 107-112

**Моделирование транспортных уравнений в полупроводниках**  
**Rang, Toomas** Исследования по прикладной квантовой электронике 1987 / с. 37-42

**Модель ключа на базе ВТСП**  
**Rang, Toomas; Koel, Ants** Tallinna Tehnikaülikooli Toimetised 1990 / lk. 109-116: ill

**Модель межсоединений/линии передачи на базе ВТСП**  
Orro, S.; Rang, Toomas Tallinna Tehnikaülikooli Toimetised 1990 / lk. 103-108

**Нелинейная зарядовая модель тиристора**  
**Rang, Toomas** Измерение и моделирование в электронике 1987 / с. 94-100

**Нелинейная модель тиристора для программы анализа цепей**  
**Rang, Toomas** Проблемы моделирования и измерения в электронике 1986 / с. 13-19

**Низкотемпературный отжиг слаболегированных слоев n-4H-SiC после облучения быстрыми электронами**  
**Korolkov, Oleg; Kozlovski, Vitali; Lebedev, Alexander; Sleptšuk, Natalja; Toompuu, Jana; Rang, Toomas** Физика и техника полупроводников 2019 / с. 991-994 <https://doi.org/10.21883/FTP.2019.07.47879.9089>

**Программа определения параметров "ОПТИ"**  
**Rang, Toomas** Проблемы моделирования и измерения в электронике 1986 / с. 21-26

**Радиотехника**  
**Umborg, Jaak; Hinrikus, Hiie; Meigas, Kalju; Zahharov, Boriss; Taklaja, Andres; Rang, Toomas; Manak, I.S.; Lissenkova, A.M.; Bondarenko, A.N.; Falkova, N.V.; Krusell, Urmas** 1987 [https://www.ester.ee/record=b1273963\\*est](https://www.ester.ee/record=b1273963*est)

**Расчет туннельного тока в переходах металл - полупроводник**  
**Rang, Toomas** Расчет и проектирование измерительных преобразователей 1983 / с. 69-74

**Специализированные базы данных для программных средств моделирования и анализа элементов твердотельной электроники**  
**Orro, S.; Rang, Toomas** Машинное проектирование электронных устройств и систем 1989 / с. 20-24

**Сравнение разных методов оптимизации**  
**Rang, Toomas** Моделирование и управление в системах технической кибернетики 1987 / с. 77-84

### **Численное моделирование рп-структур с двойной фаски с помощью программы "FAAS"**

**Rang, Toomas; Nurste, Ivar** Измерение и моделирование в электронике 1987 / с. 89-93

### **Численное моделирование диода шоттки на ЭВМ**

**Rang, Toomas; Udal, Andres** Проблемы моделирования полупроводниковых структур и сложных схем на ЭВМ 1982 / с. 21-31

### **Численное моделирование мощных диодов Шоттки на ЭВМ**

**Rang, Toomas; Udal, Andres** Известия высших учебных заведений : международный ежемесячный научно-технический журнал. Радиоэлектроника 1983 / с. 92-93 [https://www.ester.ee/record=b2768571\\*est](https://www.ester.ee/record=b2768571*est)

### **Численное моделирование технологического процесса изготовления полупроводниковых приборов. Модель диффузии**

**Nobel, Peter** XXVII студенческая научно-техническая конференция вузов Прибалтийских республик, Белорусской ССР и Молдавской ССР, 19-21 апреля 1983 г. : тезисы докладов. Часть 3 1983 / с. 14 [https://www.ester.ee/record=b1571572\\*est](https://www.ester.ee/record=b1571572*est)

### **Численное моделирование технологического процесса полупроводниковых приборов**

**Rang, Toomas** Проблемы моделирования полупроводниковых структур и сложных схем на ЭВМ 1982 / с. 33-37

### **Электротехника и автоматика**

**Laansoo, Ants; Aarna, Olav; Metsanurm, Margus; Teder, Toomas; Kiitam, Andres; Saks, Eva; Land, Raul; Min, Mart; Rimmel, Ülo; Ronk, Ants; Rang, Toomas** 1987 [https://www.ester.ee/record=b1221893\\*est](https://www.ester.ee/record=b1221893*est)

### **Электротехника и автоматика**

**Kukk, Vello; Tamm, Uljas; Pikkov, Otto; Min, Mart; Velmre, Enn; Udal, Andres; Nurste, Ivar; Freidin, Boris; Rang, Toomas; Opoiski, Aleksei; Laansoo, Ants; Männama, Vello; Järvalt, Aldur; Gurjanov, Boris; Lavrov, Mihhail; Belkina, I.I.; Plakk, Paul; Plakk, Peeter; Plakk, T.** 1987 [https://www.ester.ee/record=b1224910\\*est](https://www.ester.ee/record=b1224910*est)

### **Электротехника и автоматика**

**Rüstern, Ennu; Keevallik, Andres; Kruus, Margus; Salum, Kaja; Berkman, Boriss; Tammemäe, Kalle; Alango, Villem; Kont, Toomas; Ubar, Raimund-Johannes; Lohuaru, Tõnu; Štraube, B.; Elst, G.; Bombik, B.; Viies, Vladimir; Gallai, S.; Rang, Toomas; Laansoo, Ants; Männama, Vello; Pikkov, Otto; Gurjanov, Boris; Opoiski, Aleksei; Velmre, Enn** 1988 [https://www.ester.ee/record=b1256708\\*est](https://www.ester.ee/record=b1256708*est)

### **Электротехника и автоматика**

**Mägi, Harri; Velmre, Enn; Pikkov, Mihhail; Orro, S.; Rang, Toomas; Gurjanov, Boris; Kruus, Margus; Salum, Kaja; Berkman, Boriss; Keevallik, Andres; Kasirova, Lilia; Kruus, Margus; Ellervee, Peeter; Ubar, Raimund-Johannes; Grigorjeva, Ksenja; Kont, Toomas** 1989 [https://www.ester.ee/record=b1285446\\*est](https://www.ester.ee/record=b1285446*est)

### **Электротехника и автоматика**

**Laansoo, Ants; Velmre, Enn; Rang, Toomas; Freidin, Boris; Rubinstein, M.J.; Männama, Vello; Järvalt, Aldur; Bachverk, Aleksander; Rähmi, S.; Tamm, Uljas; Plakk, Mari; Logunov, Gennadi; Tagger, Jüri; Kalm, Evald; Koik, P.; Aarna, Olav** 1981 [https://www.ester.ee/record=b1319172\\*est](https://www.ester.ee/record=b1319172*est)

### **Электротехника и автоматика**

**Kukk, Vello; Voolaine, Andrus; Jõgi, Aksel; Pall, Martin; Ubar, Raimund-Johannes; Kitsnik, Peeter; Toomsalu, Arvo; Grigorjeva, Ksenja; Lohuaru, Tõnu; Evertson, Teet; Božič, V.I.; Galujev, G.A.; Sudnitsõn, Aleksander; Berkman, Boriss; Rang, Toomas; Velmre, Enn** 1982 [https://www.ester.ee/record=b1328194\\*est](https://www.ester.ee/record=b1328194*est)

### **Электротехника и автоматика**

**Tamm, Uljas; Udal, Andres; Rang, Toomas; Freidin, Boris; Velmre, Enn; Nurste, Ivar; Laansoo, Ants; Männama, Vello; Järvalt, Aldur; Gurjanov, Boris; Pikkov, Otto; Rebane, Jüri; Aarna, Olav; Teder, Toomas** 1982 [https://www.ester.ee/record=b1339926\\*est](https://www.ester.ee/record=b1339926*est)

### **Электротехника и автоматика**

**Laansoo, Ants; Väljamäe, Gunnar; Tilk, Johan; Uutma, Toomas; Peterson, Jaak; Parve, Toomas; Logunov, Gennadi; Gurjanov, Boris; Gordon, Boris; Rüstern, Ennu; Velmre, Enn; Rang, Toomas; Köverik, Kait; Järvalt, Aldur; Sildaru, Kalev** 1983 [https://www.ester.ee/record=b1288985\\*est](https://www.ester.ee/record=b1288985*est)

### **Электротехника и автоматика**

**Ubar, Raimund-Johannes; Rang, Toomas; Velmre, Enn; Evertson, Teet; Voolaine, A.; Toome, Tõnis; Viilup, Agu; Sudnitsõn, Aleksander; Berkman, Boriss; Rüstern, Ennu; Leis, Paul; Keevallik, Andres; Kruus, Margus; Jüris, A.** 1984 [https://www.ester.ee/record=b1549179\\*est](https://www.ester.ee/record=b1549179*est)

### **Электротехника и автоматика**

**Kukk, Vello**; Tarnay, K.; Szekely, V.; Baji, P.; Farkas, G.; Masszi, F.; Kerecsen-Rencz, M.; **Rang, Toomas; Plakk, Paul; Plakk, Peeter**; Plakk, T.; **Gurjanov, Boris; Männama, Vello; Laansoo, Ants; Pikkov, Otto**; Rudski, V.A.; **Köverik, Kait** 1986  
[https://www.ester.ee/record=b1296007\\*est](https://www.ester.ee/record=b1296007*est)

**Электротехника и автоматика**

**Mägi, Harri; Rüstern, Ennu; AArna, Olav; Kiitam, Andres; Land, Raul; Min, Mart; Ronk, Ants; Parve, Toomas; Rang, Toomas;** Mahhitko, V.P.; Šendrik, M.G.; **Tamm, Boris, inform.** 1986 [https://www.ester.ee/record=b1296468\\*est](https://www.ester.ee/record=b1296468*est)