

## **Publications of Dr. Frank Dimroth**

*Selection of Journal Articles out of a total of 360 scientific publications including conference proceedings*

1. H. Mizuno, K. Makita, H. Sai, T. Mochizuki, T. Matsui, H. Takato, R. Müller, D. Lackner, F. Dimroth, and T. Sugaya, "Integration of Si Heterojunction Solar Cells with III-V Solar Cells by the Pd Nanoparticle Array-Mediated "Smart Stack" Approach," ACS Applied Materials and Interfaces, vol. 14, no. 9, pp. 11322–11329, (2022).
2. K. Makita, Y. Kamikawa, H. Mizuno, R. Oshima, Y. Shoji, S. Ishizuka, R. Muller, D. Lackner, F. Dimroth, and T. Sugaya, "GaAs//CuIn<sub>1-y</sub>Ga<sub>y</sub>Se<sub>2</sub> Three-Junction Solar Cells With 28.06% Efficiency Fabricated Using a Bonding Technique Involving Pd Nanoparticles and an Adhesive," IEEE J. Photovoltaics, vol. 12, no. 2, pp. 639–645, (2022).
3. P. Schygulla, F. D. Heinz, F. Dimroth, and D. Lackner, "Middle Cell Development for Wafer-Bonded III-V//Si Tandem Solar Cells," IEEE J. Photovolt., vol. 11, no. 5, pp. 1264–1270, (2021).
4. J. E. Ruiz, D. Lackner, P. L. Souza, F. Dimroth, and J. Ohlmann, "Nitrogen and carbon incorporation in Ga<sub>N</sub>As<sub>1-x</sub> grown in a showerhead MOVPE reactor," Journal of Crystal Growth, vol. 557, p. 125998, (2021).
5. M. Yamaguchi, F. Dimroth, J. F. Geisz, and N. J. Ekins-Daukes, "Multi-junction solar cells paving the way for super high-efficiency," J. Appl. Phys., vol. 129, no. 24, p. 240901, (2021).
6. P. Schygulla, R. Müller, D. Lackner, O. Höhn, H. Hauser, B. Bläsi, F. Predan, J. Benick, M. Hermle, S. W. Glunz, and F. Dimroth, "Two-terminal III-V//Si triple-junction solar cell with power conversion efficiency of 35.9 % at AM1.5g," Prog Photovolt Res Appl, to be published, (2021).
7. O. Höhn, J. N. Murthy, M. Steiner, N. Tucher, E. Lorenz, J. C. Goldschmidt, F. Dimroth, and B. Blasi, "Impact of Irradiance Data on the Energy Yield Modeling of Dual-Junction Solar Module Stacks for One-Sun Applications," IEEE J. Photovolt., vol. 11, no. 3, pp. 692–698, (2021).
8. H. Helmers, E. Lopez, O. Höhn, D. Lackner, J. Schön, M. Schauerte, M. Schachtner, F. Dimroth, and A. W. Bett, "68.9% Efficient GaAs-Based Photonic Power Conversion Enabled by Photon Recycling and Optical Resonance," Phys. Status Solidi RRL, vol. 15, no. 7, p. 2100113, (2021).
9. M. Feifel, D. Lackner, J. Schön, J. Ohlmann, J. Benick, G. Siefert, F. Predan, M. Hermle, and F. Dimroth, "Epitaxial GaInP/GaAs/Si Triple-Junction Solar Cell with 25.9% AM1.5g Efficiency Enabled by Transparent Metamorphic Al<sub>x</sub>Ga<sub>1-x</sub>As<sub>y</sub>P<sub>1-y</sub> Step-Graded Buffer Structures," Sol. RRL, vol. 5, no. 5, p. 2000763, (2021).
10. J. F. Martínez, M. Steiner, M. Wiesenfarth, G. Siefert, S. W. Glunz, and F. Dimroth, "Power rating procedure of hybrid concentrator/flat-plate photovoltaic bifacial modules," Prog Photovolt Res Appl, vol. 29, no. 6, pp. 614–629, (2021).
11. K. Makita, Y. Kamikawa, H. Mizuno, R. Oshima, Y. Shoji, S. Ishizuka, R. Müller, P. Beutel, D. Lackner, J. Benick, M. Hermle, F. Dimroth, and T. Sugaya, "III-V//Cu<sub>x</sub>In<sub>1-y</sub>Ga<sub>y</sub>Se<sub>2</sub> multijunction solar cells with 27.2% efficiency fabricated using modified smart stack technology with Pd nanoparticle array and adhesive material," Prog Photovolt Res Appl, vol. 29, no. 8, pp. 887–898, (2021).
12. F. Predan, O. Hohn, D. Lackner, A. Franke, H. Helmers, and F. Dimroth, "Development and Analysis of Wafer-Bonded Four-Junction Solar Cells Based on Antimonides with 42% Efficiency under Concentration," IEEE J. Photovolt., vol. 10, no. 2, pp. 495–501, (2020).
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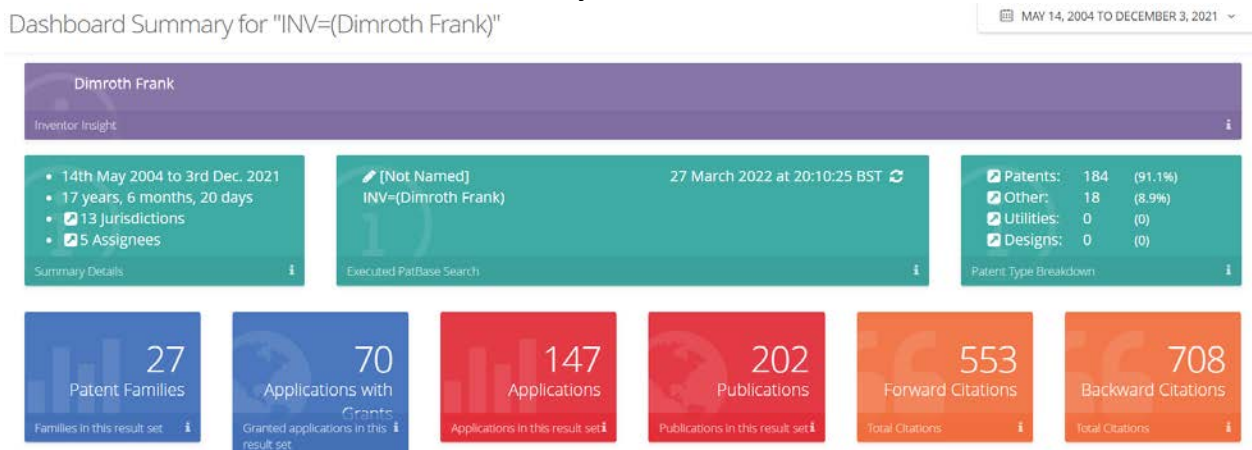
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