

DSM Science & Technology Awards (SOUTH) 2009	
Name	Jan Streuff
University	Université de Strasbourg
Department	Laboratoire de Catalyse Homogène et Synthèse Moléculaire
PhD Supervisor	Prof. Kilian Muñoz

Jan Streuff has developed the first catalytic oxidative diamination reaction of olefins. This reaction stands out as one of the first examples of palladium(IV) catalysis in nitrogen transfer reactions. He successfully revealed the reaction mechanism and demonstrated the flexibility of this diamination reaction on a great number of substrates. Further extension to nickel salts provided alternative catalysts for which this kind of reactivity was totally unknown before. Overall, this pioneering work allows simple access to cyclic urea, sulfamide and guanidine building blocks as well as 1,2-diamines all of them being important precursors for pharmaceutical products. As a consequence the application of this reaction will significantly reduce production costs and the amount of waste generated. This work will have implications for future innovations since it demonstrates an entirely new way for the installment of carbon-nitrogen bonds.