Curriculum Vitae (short)

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Prof. Sariciftci is Ordinarius Professor for Physical Chemistry and the Founding Director of the Linz Institute for Organic Solarcells (LIOS) at the Johannes Kepler University of Linz/Austria.
He studied at the University of Vienna (Austria) and graduated as PhD in physics in 1989. After two years postdoctoral study at the University of Stuttgart (Germany) he joined the Institute for Polymers and Organic Solids at the University of California, Santa Barbara, USA, by Prof. Alan J. HEEGER, Nobel leaurate 2000 for Chemistry. His major contributions are in the fields of photoinduced optical, magnetic resonance and transport phenomena in semiconducting and metallic polymers. He is the inventor of conjugated polymer and fullerene based "bulk heterojunction" solar cells. Prof. Sariciftci published over 600 publications and with over 94000 citations he is one of the most cited scientists in material science (2011, Thompson Reuter ranking No: 14 of the world in material science). Google scholar ranks Sariciftci with an h-index of >132. Sariciftci has composed 8 books and educated several academic and industrial scientists. He also initiated seven spin off companies for organic optoelectronics. He is recipient of several prizes among them the National Science Prize of Turkey 2006 and the Austrian Scientists of the year Prize for Research 2008. He received the Medal for Humanity of the City of Linz 2009 and the Kardinal Prize for Science of the Archbishop in Vienna 2010. In 2012 he was awarded the prestigious Wittgenstein Prize of Austria. He is a Fellow of the Royal Society of Chemistry (FRSC), Fellow of SPIE, and member of several societies such as American Chemical Society, Materials Research Society, Austrian Chemical Society and Austrian Physical Society. He was selected as corresponding member of the Academy of Science in Austria (ÖAW). Sariciftci has been awarded honorary doctorate by the Abo Academy in Finland in 2011 and University of Bucharest in Romania in 2012. Sariciftci received the TÜBA Science Prize of the Turkish Academy of Sciences (2015) and was selected as member of the Turkish Academy of Sciences in 2017. He received the Selcuk Yasar University Prize for Advancement of Science and Humanity in Turkey in 2020. In 2022 Prof. Sariciftci was selected as fellow of the Ethiophian Academy of Sciences for his services to education of scientists from Ethiophia.

From Photovoltaics to Artificial Fuels: Photo-Electrochemical Reduction of CO_2 into Synthetic Carbohydrates using Solar Energy

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In order to account for a sustainable future, the transport and storage of renewable energies are necessary. We report on the conversion of CO_2 to chemical energy carrying compounds like methane, methanol and/or other synthetic fuels using conjugated, conducting polymers and bio-organic molecular systems. We studied materials like conducting polymers of the third generation, functionalized with bio-organic catalysts in photo-electro-catalytic conversion devices. Going one step further, bio-catalysts such as enzymes as well as living bacteria can be immobilized on electrodes. We report alternatively on immobilizing of enzymes onto functionalized graphene units creating a nano-bio-catalytic platform. Selectivity of such bio-catalysts is very high and combined with the room temperature operation of such bio-electro-catalytic systems this makes them industrially highly attractive.