Sevki Can CEVHER

cevhersc@gmail.com

Education:

September 2013- October 2019	Graduate (**PhD. Degree**) **Middle East Technical University** Graduate School of Natural and Applied Sciences Chemistry Department GPA: 3.21/4.00
September 2011- September 2013	Graduate (**M.Sc. Degree**) **Middle East Technical University** Graduate School of Natural and Applied Sciences Chemistry Department CGPA: 3.43/4.00
September 2006- July 2011	Undergraduate **(B.Sc. Degree)** **Middle East Technical University** Faculty of Art and Sciences Chemistry Department CGPA: 2.72/4.00

Research experiences:

(December 2019- present) Simulation and Synthesis Research Laboratories
Prof. Dr. Ulrike Salzner and Prof. Dr. Dönüş Tuncel Bilkent University/ Ankara/ Turkey
Postdoctoral Researcher

(November 2010 – 2019) Conducting Polymers Research Laboratory
Prof. Dr. Ali Cirpan Middle East Technical University/ Ankara/ Turkey
(September 2015-2019) Group leader of the synthetic chemistry laboratory

(August- September 2013) Organic Photonics Laboratory
Prof. Dr. Paul M. Lahti University of Massachusetts-Amherst/ USA
Visiting Scholar

(Spring 2009) Spectro-Analytical Instrument Laboratory
Prof. Dr. Yavuz O. Ataman Middle East Technical University/ Ankara/ Turkey
Undergraduate volunteer research student

(Fall 2009) Asymmetric Synthesis Laboratory
Prof. Dr. Ayhan Sitki Demir Middle East Technical University/ Ankara/ Turkey
Undergraduate volunteer research student

Work experiences:

(Fall 2011- 2019) Teaching Assistant, **Chemistry Department**
Middle East Technical University

(Spring 2018- Spring 2019) **Physical Chemistry Laboratory I & II**– Teaching the basic methodology of physical chemistry; such as, reaction rate, adsorption, reaction kinetics, properties of mixtures, molecular weight determination from viscosity of polymer solutions, thermodynamics so on so forth and providing hands on experience to 2nd & 3rd year grade chemistry students.

(Fall 2017) **General Chemistry Laboratory** – Teaching basic apparatuses and equipment of a laboratory and providing hands on experience to general chemistry students in the laboratory about basic principles of laboratory technics.

(Fall 2014- Spring 2017) **Physical Chemistry Laboratory I & II** –

(Spring 2013) **Instrumental Analysis Laboratory II** – Teaching the technic and method which to be used to determine properties of a material, such as concentration, kind of a species, fluorescence characteristics, HOMO& LUMO levels, refractive index, reaction kinetics also some separation techniques such as TLC, HPLC, GC and so on so forth and providing hands on experience to 3rd year grade chemistry students.

(Fall 2013) **General Chemistry Laboratory** –

(Spring 2012) **Instrumental Analysis Laboratory II**

(Fall 2011-Fall 2012) **General Chemistry Laboratory**

Experiences:

(July 2011) **Assistant**, **43th International Chemistry Olympiads**
Middle East Technical University

(July-August 2010) **Internship**, PETKIM- producer and exporter petrochemical products- (Aliaga-Izmir/ Turkey)

(Summer 2009) **Volunteer**, **European Volunteer Service**
Compass Egyesulet, **Hungary**
Unpaid-fulltime-voluntary activities, for example helping handicapped people, kindergartener, for developing solidarity, mutual understanding and tolerance among young people, thus contributing to reinforcing social cohesion in the European Union and to promoting young people's active citizenship.

Publications:

1) Laçin Özge., Kwiczak-Yiğitbaşı Joanna., Erkan Meltem., **CEVHER ŞEVKI CAN**, Baytekin Bilge (2019) The morphological changes upon cryomilling of cellulose and concurrent generation of mechanoradicals, Polymer Degradation and Stability 168, 108945-18954

2) Goksu Kardelen, Hizalan Gonul, Udum Yasemin Arslan, Hacioglu Serife Ozdemir, **CEVHER SEVKI CAN**, Akrema, Toppare Levent, Cirpan Ali (2019) Syntheses and Characterization of Benzotriazole, Thienopyrroledione, and Benzodithiophene Containing Conjugated Random Terpolymers for Organic Solar Cells, Journal of The Electrochemical Society 166 (15) H849-H859

3) Keles Duygu, Erer Mert Can, Bolayır Eda, **CEVHER ŞEVKİ CAN**, Hizalan Gönül, Toppare Levent, Cirpan Ali, (2019) Conjugated polymers with benzothiadiazole and benzotriazole moieties for polymer solar cells, Renewable Energy 139, 1184-1193

4) **CEVHER ŞEVKİ CAN,** Keles Duygu, Hızalan Gonul, Toppare Levent, Cirpan Ali (2018) Alkyl-End Phenanthroimidazole Modification Of Benzotriazole Based Conjugated Polymers For Optoelectronic Applications, Synthetic Metals, 244, 1-9.

5) Çetin Aslı, İstanbulluoğlu Çağla, Özdemir Hacioğlu Şerife, **CEVHER ŞEVKİ CAN**, Toppare Levent Kamil, Çirpan Ali (2017). Synthesis Of Bistriphenylamine And Benzodithiophene Based Random Conjugated Polymers For Organic Photovoltaic Applications. Journal of Polymer Science, Part A: Polymer Chemistry, 55, 3705-3715.

6) Karagaçtı Özge, **CEVHER ŞEVKİ CAN**, Hizalan Özsoy Gönül, Özdemir Hacioğlu Şerife, Toppare Levent Kamil, Çirpan Ali (2017). Enhancing Power Conversion Efficiency of Polymer Solar Cells via Selection of Quinoxaline Substituents. New Journal of Chemistry, 41, 14635-14645.

7) Azeri Özge,Aktaş Ece, İstanbulluoğlu Çağla,Özdemir Hacioğlu Şerife, **CEVHER ŞEVKİ CAN**, Toppare Levent Kamil, Çirpan Ali (2017). Efficient Benzodithiophene and Thienopyrroledione Containing Random Polymers as Components for Organic Solar Cells. Polymer, 133, 60-67.

8) Önk İpek, Hizalan Gönül, **CEVHER ŞEVKİ CAN**, Hacığlu Özdemir Şerife, Toppare Levent, Çırpan Ali (2017). Multipurpose selenophene containing conjugated polymers for optoelectronic applications. Journal of Macromolecular Science, Part A Pure and Applied Chemistry, 54 (3), 133-139.

9) **CEVHER ŞEVKİ CAN**, Hizalan Gönül, Temiz Cansel, Udum Arslan Yasemin, Toppare Levent, Çırpan Ali (2016). Effect of substituent groups on quinoxaline-based random copolymers on the optoelectronic and photovoltaic properties. Polymer, 101, 208–216.

10) Yuksel Recep,**CEVHER ŞEVKİ CAN**, Çırpan Ali, Toppare Levent Kamil ,Ünalan Hüsnü Emrah (2015). All-Organic Electrochromic Supercapacitor Electrodes. Journal of The Electrochemical Society, 162(14), 2805-2810.

11) Kesik Melis, Demir B,Barlas F B,Geyik C, **CEVHER ŞEVKİ CAN**, Odaci Demirkol, Çırpan Ali, Toppare Levent Kamil (2015). A multi-functional fluorescent scaffold as a multi-colour probe: design and application in targeted cell imaging. RSC Adv., 5(101), 83361-83367.

12) Akpinar Handan, **CEVHER ŞEVKİ CAN**, Wei Lang,Çırpan Ali, Wong Bryan M, Venkataraman Dhandapani, Lahti Paul M (2015). Poly((2-alkylbenzo[1,2,3]triazole-4,7-diyl)vinylene)s for organic solar cells. Journal of Polymer Science Part B: Polymer Physics, 53(21), 1539-1545.

13) Kesik Melis, Huseyin Akbulut, Söylemez Saniye, **CEVHER ŞEVKİ CAN**, Hızalan Özsoy Gönül, Udum Yasemin, Endo Takeshi, Shuhei Yamada, Çırpan Ali, Yağcı Yusuf, Toppare Levent Kamil (2014). Synthesis and characterization of conducting polymers containing polypeptide and ferrocene side chains as ethanol biosensors. Polym. Chem., 5(21), 6295-6306.

14) **CEVHER ŞEVKİ CAN**, Unlu Naime Akbasoglu, Ozelcaglayan Ali Can, Apaydin Dogukan Hazar, Udum Yasemin Arslan, Toppare Levent Kamil, Cirpan Ali (2013). Fused structures in the polymer backbone to investigate the photovoltaic and electrochromic properties of donor-acceptor-type conjugated polymers. Journal of Polymer Science Part A: Polymer Chemistry, 51(9), 1933-1941.

Academic Conferences:

1) September 2018, Uluslararasi Katilimli 7. Polimer Bilim Ve Teknoloji Kongresi Eskişehir/ Turkey
S. Öztürk, **Ş. C. Cevher**, Y. A. Udum, L. Toppare, Ali Cirpan *Thienopyrrole And Selenopyyrole Fused Benzothidiazole Containing Polymers For Solar Cell Applications*

2) September 2018, Uluslararasi Katilimli 7. Polimer Bilim Ve Teknoloji Kongresi Eskişehir/ Turkey
M. Yıldırım, **S. C. Cevher**, L. Toppare, A.Cirpan *Optıcal And Electrochemıcal Propertıes Of Benzotrıazole And Benzodıthıophene Contaınıng Alternatıng Copolymers*

3) September 2018, Uluslararasi Katilimli 7. Polimer Bilim Ve Teknoloji Kongresi Eskişehir/ Turkey

M. Calıskan, **S. C. Cevher**, Sultan T. Aslan, A.Cirpan, *Selenophene Based Benzodithiophene And Quinoxaline Containing Alternating Conjugated Polymers For BulkHeterojunction Solar Cell Applications*

4) September 2018, Uluslararasi Katilimli 7. Polimer Bilim Ve Teknoloji Kongresi Eskişehir/ Turkey
G. Özkul, **S.C. Cevher**, L. Toppare, A. Cirpan *Syntheses of Fluorinated Quinoxaline-Based Conjugated Copolymers*

5) September 2018, Uluslararasi Katilimli 7. Polimer Bilim Ve Teknoloji Kongresi Eskişehir/ Turkey
E. Alemdar, D. Güven, **S. C. Cevher**, E. Bolayir, G. Hizalan, S. O. Hacioglu, L. Toppare, A.Cirpan *Benzodithiophene Bearing Polymers- Synthesis And Electrochemical Studies*

6) September 2018, Uluslararasi Katilimli 7. Polimer Bilim Ve Teknoloji Kongresi Eskişehir/ Turkey
Ş. C. Cevher, D. Keleş, G. Hızalan, L. Toppare, A. Çırpan *Synthesis of Phenanthroimidazole-Attached-Benzotriazole Based Conjugated Polymers and Their Optoelectronic Applications*

7) July 2018, International Conference on Photovoltaic Science and Technologies (PVCon2018) Ankara / Turkey
K. Göksu, **Ş. C. Cevher**, Ö. Azeri, Ö. Ünal, G. H. Özsoy, L. Toppare, A. Çırpan, *Synthesis and characterization of benzotriazole containing conjugated polymers for bulk heterojunction organic photovoltaics*

8) July 2018, International Conference on Photovoltaic Science and Technologies (PVCon2018) Ankara / Turkey
E.Alemdar, **S. C. Cevher**, G. Hizalan, S. O. Hacioglu, L. Toppare, A. Cirpan, *Bistriphenylamine- and Benzodithiophene- Based Random Conjugated Polymers in Ternary Blend Bulk Heterojunction Organic Solar Cells*

9) July 2018, International Conference on Photovoltaic Science and Technologies (PVCon2018) Ankara / Turkey
E. Bolayir, **Ş. C. Cevher**, Ş. Hacioğlu, G. Hizalan, A. Çirpan, L. Toppare, *Inverted Organic Solar Cell Applications of Benzodithiophene and Benzotriazole Bearing Alternating Copolymer*

10) July 2018, International Conference on Photovoltaic Science and Technologies (PVCon2018) Ankara / Turkey
S.T. Aslan, **Ş. C. Cevher**, E. Bolayır, Ö. Ünalan, L. Toppare, A.Çırpan, *Organic Bulk Heterojunction Solar Cells Based On Benzodithiophene And Benzothiadiazole Containing Conjugated Polymers.*

11) July 2018, International Conference on Photovoltaic Science and Technologies (PVCon2018) Ankara /Turkey
S. Öztürk, **Ş. C. Cevher**, M. C. Erer, Y.A. Udum, L. Toppare, A. Çirpan, "*Photovoltaic Properties Of Thienopyrrole And Selenopyyrole Fused Benzothidiazole Containing Polymers*

12) May 2017, Advanced Polymers via Macromolecular Engineering (APME 2017) Ghent/ Belgium
A.Cetin, **S. C. Cevher**, C. Istanbulluoglu, S. O. Hacioglu, L. Toppare, A.Cirpan *Random Copolymers Comprising Derivatives Of Triphenylamine, Benzodithiophene And Benzotriazole Moieties For Photovoltaic Applications*

13) May 2017, Advanced Polymers via Macromolecular Engineering (APME 2017) Ghent/ Belgium
Ö. Karagaçti**, Ş. C. Cevher**, G.Hizalan, S. O. Hacioglu, L. Toppare, A.Cirpan *New Quinoxaline Containing Donor-Acceptor Type Conjugated Polymers For Organic Solar Cells*.

14) September 2017, 29. Ulusal Kimya Kongresi, Ankara/Turkey
M. C. Erer, **Ş. C. Cevher**, E. Aktaş, L. Toppare, A. Çirpan *Benzoditiyofen İçeren Donör-Akseptör Tipi Konjüge Polimerin Sentezlenmesi ve Fotovoltaik Özelliklerinin İncelenmesi*

15) September 2017, 29. Ulusal Kimya Kongresi, Ankara/Turkey
Ö. Karagaçti, **Ş. C. Cevher**, G. Hizalan, Ç. İstanbulluoğlu, Ş. Ö. Hacioğlu, L. Toppare, A. Çirpan *Kinoksalin,Benzoditiyofen ve Benzotriazole Türevleri İçeren astgele Polimerin Elektriksel, Optik ve Fotovoltaik Özellikleri*

16) September 2017, 29. Ulusal Kimya Kongresi, Ankara/Turkey
A. Çetin, **Ş. C. Cevher**, Ç. İstanbulluoğlu, Ş.Ö. Hacioğlu, L. Toppare, A. Çirpan *Trifenilamin, Benzoditiyofen ve Benzotriazole Türevleri İçeren Serbest Konjüge Polimerlerin Elektriksel ve Optik Özellikleri*

17) March 2016, 251st American Chemical Society National Meeting & Expotion Theme: Computers in Chemistry, San Diego, CA, USA
M. Kesik, H. Akbulut, S. Soylemez, **S. C. Cevher**, G. Hizalan, Y. A. Udum, T. Endo, S. Yamada, A.Cirpan, Y. Yagci, L. Toppapre, *Synthesis and characterization of conducting polymers containing polypeptide and ferrocene side chains as ethanol biosensors*

18) July 2016, 46th IUPAC World Polymer Congress (MACRO 2016), İstanbul/ Turkey
M. Kesik, B. Demir, F. B. Barlas, C. Geyik, **S. C. Cevher**, D. O. Demirkol, S. Timur, A. Cirpan, L. Toppapre, *Multi-Functional Fluorescent Scaffold as a Multicolor Probe: Design and Application in Targeted Cell Imaging*

19) May 2016, European Materials Research Society (e-MRS), Lille/ France
S.C. Cevher, C. Temiz, G. Hizalan, Y.A. Udum, L. Toppare, A. Cirpan, *Modifications Of Quinoxaline On The Polymeric Materials For Optoelectronic Devices*

20) May 2016, European Materials Research Society (e-MRS), Lille/ France
N. Sohrabnia, **S.C. Cevher**, G. Hizalan, L. Toppare, A. Cirpan, *Optoelctronic Application of Phenanthrenyl-Imidazole Derivatives*

21) May 2016, European Materials Research Society (e-MRS), Lille/ France

I. Onk, C. Istanbulluoglu, G. Hizalan, S. Hacioglu, **S.C. Cevher**, A. Cirpan, L. Toppare, *Carbazole Based Alternating Copolymer For Electrochromic And Organic Photovoltaic Applications*

22) May 2015,5. Fiziksel Kimya Kongresi, Konya/ Turkey
C. Temiz, N. A. Unlu, **S.C. Cevher**, S.O. Hacioglu, L. Toppare, A. Cirpan *Organic güneş pili uygulamaları için benzotriazol ve kuinokzalin yapıları içeren konjuge polimer*

23) September 2014, V.Ulusal Polimer Bilim ve Teknolojisi Kongresi, Tokat/ Turkey
C. Temiz, N.A. Unlu, **S.C. Cevher**, S.O. Hacioglu, L. Toppare, A. Cirpan, *Organik Işık Yayan Diyotlar İçin Benzotriazol İçeren Konjuge Polimerler*

24) September 2014, V.Ulusal Polimer Bilim ve Teknolojisi Kongresi, Tokat/ Turkey
O. Azeri, **S.C. Cevher** ,S.O. Hacioglu, A. Cirpan, *Organik güneş pilleri için bitişik thiazolo-thiazole halkası içeren konjuge polimer*

25) September 2014, V.Ulusal Polimer Bilim ve Teknolojisi Kongresi, Tokat/ Turkey
A.O. Saf, N.A. Unlu, **S.C. Cevher**, A. Cirpan *Farklı miktarda piridin türevi içeren konjüge polimerlerin sentezi, karakterizasyonu ve güneş pili uygulamaları*

26) June 2014, IV. Fiziksel Kimya Kongresi, Denizli/ Turkey
S.C. Cevher, Y.A. Udum, L. Toppare, A. Cirpan *Ferrosen İçeren Konjüge Polimerin Elektrokromik ve Optik Özellikleri*

27) January 2014, International Semiconductor Science and Technology Conference (ISSTC-2014), İstanbul/Turkey
D. E. Yıldız, G. Hızalan, **S. C. Cevher**, L. Toppare, A. Cirpan *Effect of Thickness on the Electrical and Optical Properties of Organic Solar Cell*

28) August 2013, 44th World Chemistry Congress (IUPAC 2013), Istanbul/ Turkey
S. C. Cevher, N. A. Unlu, L. Toppare, A. Cirpan, *Electrochromic properties of a dithieneothiophene and benzotriazole containg conjugated polymer*.

29) June 2012, 8th Nanoscience & Nanotechnology Congress, Ankara/ Turkey
S. C. Cevher, N. A. Unlu, L. Toppare, A. Cirpan, *Synthesis of Dithienothiophene and Benzotriazole Containing Conjugated Polymers and Photovoltaic Applications*.

Scholarships:

Visiting Scholar research project was funded by **Turkish Council of Higher Education** (YOK) under the supervision of **Prof. Dr. Paul M. Lahti** (**University of Massachusetts**, Amherst) (2013).

Volunteer activity in **Hungary** was supported by **The Youth in Action Programme of The European Commission** (2009).

Military Service:	**Done**
Driver's license:	Since 10.04.2007 active driver in TURKEY (class: B)
Research interest:	Polymers Photovoltaics Electrochromism Metal centered conjugated molecules Computational chemistry
Certificates:	Photoshop (Participant-Bilge Adam Company) C# web applications (Participant-Bilge Adam Company) Youth Pass (European Volunteer Service) Assistant (43rd International Chemistry Olympiads)
Language:	Turkish (Native) English (Fluent) Spanish (Beginner) French (Beginner)
Computer:	MestRe-C, Origin 8, Microsoft Office, Chemdraw, Octave, Gaussian 03, Gaussview 5.08.
Recreational activities:	100 meters run, drawing, dance (salsa), violin, keyboard, table tennis, tennis, soccer, chess, archery, multiplayer-computer games.

My main research interests were the syntheses of complex conjugated architectures and the investigation of their optoelectronic applications.

During M.Sc. studies, I was working on the incorporation of DDT (dithienothiophene) moiety to the polymer backbones. Such kind of fused structures generally decrease the solubility hence the processability. In order to investigate the properties of the fused DTT moiety in photovoltaics and to overcome the aforementioned limitations, benzotriazole was used to make the polymer solution-processable *via* long branch alkyl chain modifications and π-bridge strategy was accomplished by thiophene to decrease the band gap. Electrochromic properties were investigated and fast switching times were found in NIR region hence these structures can be used for NIR devices. Photovoltaic performances of polymers were tested. Preliminary results were found as 0.14 and 0.21 % Power Conversion Efficiency (PCE). The study was selected as a **cover article** in *Journal of Polymer Science, Part A: Polymer Chemistry.*[1]

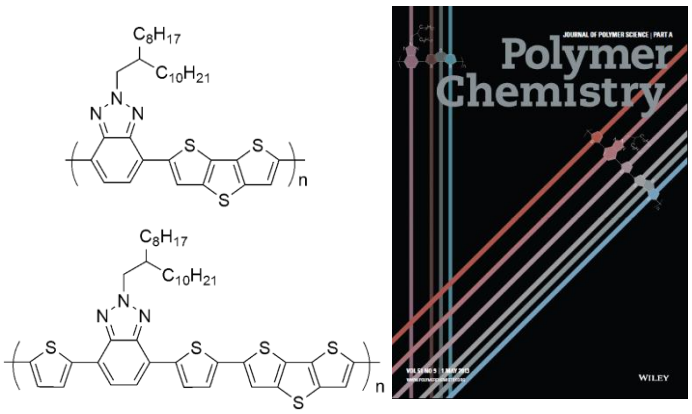


Fig.1. Synthesized polymers and **cover page** of the article.

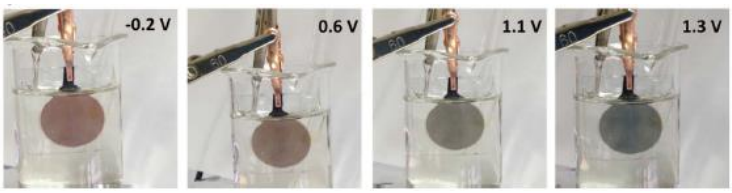


Fig.2. Colours of modified super capacitor on different voltages

Later on, we utilized one these polymers in another study in which super capacitor was modified by them. The instant capacity of the energy storage device, which was designed as **all organic supercapacitor**, was determined by multi-electrochromic properties of the polymers.[2]

Throughout my stay as **visiting scholar** at the **Prof. Dr. Paul M. Lahti**'s lab in **University of Massachusetts (Amherst, USA)** effects of pendant groups of Benzotriazolevinyl-based polymers (pBTzV) on thin film morphology and on PCE were investigated. Branch alkyl chain showed fibrillary morphology whereas straight alkyl chain featured smooth surface morphology. Theoretical studies were supported with the experimental data and PCE of the synthesized polymers were found as 2.87% for *n*-alkyl and 1.47% for branched alkyl chain. It was concluded that pBTzV pendant chain-driven morphology variation seems likely to be a major determinant of bulk electronic behavior in the solid state, and thus, further solar performance increases may be possible with this family of polymers. This study was selected as a **cover article in** *Journal of Polymer Science, Part B: Polymer Physics.*[3]

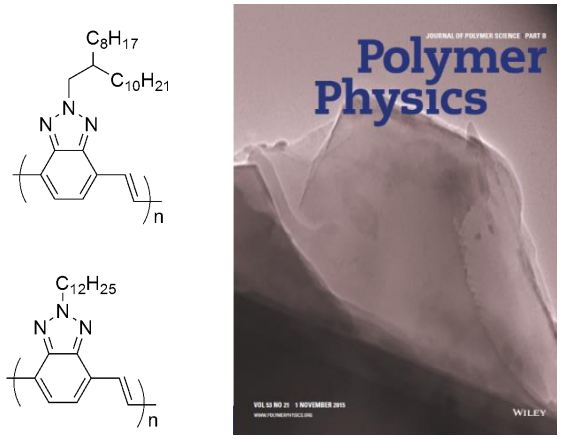


Fig.3. Alkyl chain modification of BTz polymers and **cover page** of the article

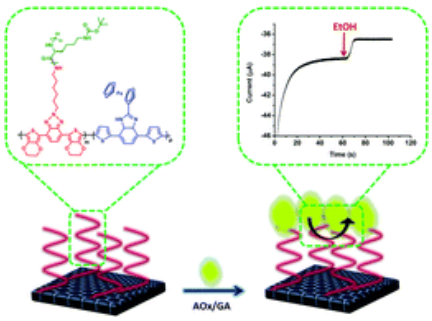


Fig.4. Conducting polymers containing polypeptide and ferrocene side chains as **ethanol biosensors.**[4]

Throughout my Ph.D., I have been involved in diverse applications of conjugated polymers. For example, I have investigated polymers in **organic light emitting diodes (OLEDs)** besides their applications in **electrochromics** and **photovoltaics**. Moreover, I have been studied these materials in some biological applications as **biosensors** and **cell targeting & imaging.**

A multi-functional fluorescent scaffold as a multicolour probe was designed and application in targeted cell imaging was successfully studied. This design offers multicolour cell images by emitting at dual wavelengths with no quenching in its fluorescent property. A fluorescent and alcohol-functionalized monomer, 3-(1*H*-phenanthro[9,10-*d*]imidazol-2-yl)phenol (PIP) and an antibody labelling kit (CF555) were merged on the same scaffold. The bioconjugated PIP/CF555/anti-CD44 was successfully used as a **novel fluorescent bio-probe for targeted** imaging of CD44 positive U87-MG **cancer cells**.[5]

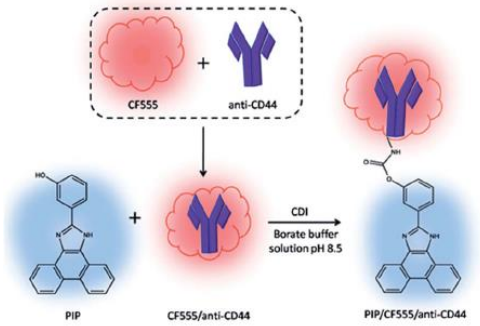


Fig.5. Preparation of PIP/CF555/anti-CD44 bioconjugate.

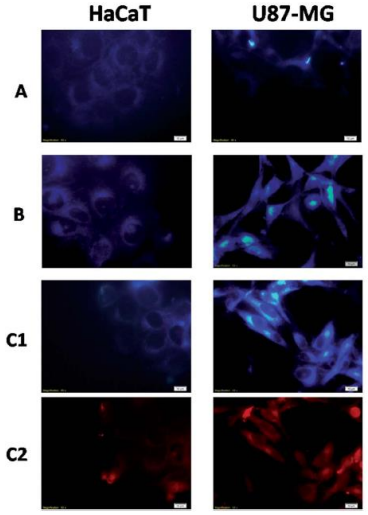
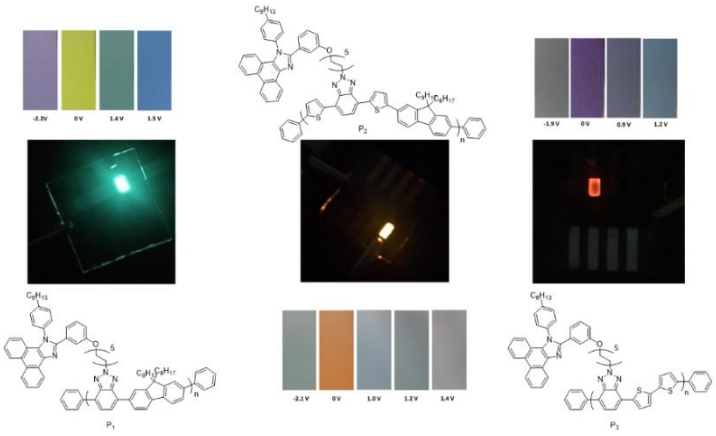


Fig.6. Imaging of HaCaT and U87-MG cells *via* fluorescence microscopy. Images were obtained after treatment of the cell with PIP monomer (A), PIP/anti-CD44 (B) and PIP/CF555/anti-CD44 (C1 and C2) for 2 h at 37 °C and 5.0% CO_2 atmosphere, under humidity. Photos of A, B and C1 were taken with UV filter of fluorescence set up. Photos of C2 were taken with red filter of fluorescence set up with 100x magnification. All scale bars are 10 mm.



Imidazole-fused structures were investigated for application in **organic light emitting diodes**. Wise engineering of the band-gap allows us to modify the wavelength of the emitted light. Luminance-voltage characteristics were investigated and luminance values were determined as 14180 cd/m^2 for P1 and 11440 cd/m^2 for P2 and 195 cd/m^2 for P3 incorporated electroluminescent device. The highest luminance efficiency for P1 based device was 3.01 cd/A at 9.5 V at a luminance value of 1665 cd/m^2.[6]

Fig.7. Side chain-modified polymers and their electrochromic and light emitting properties.

I have been also **mentoring several M.Sc. students and postdocs** in our lab in which I am the group leader of the synthetic chemistry laboratory. Their projects mainly cover the syntheses and investigations of the properties of the conjugated polymers in organic photovoltaics and some yet unpublished studies.[7–11]

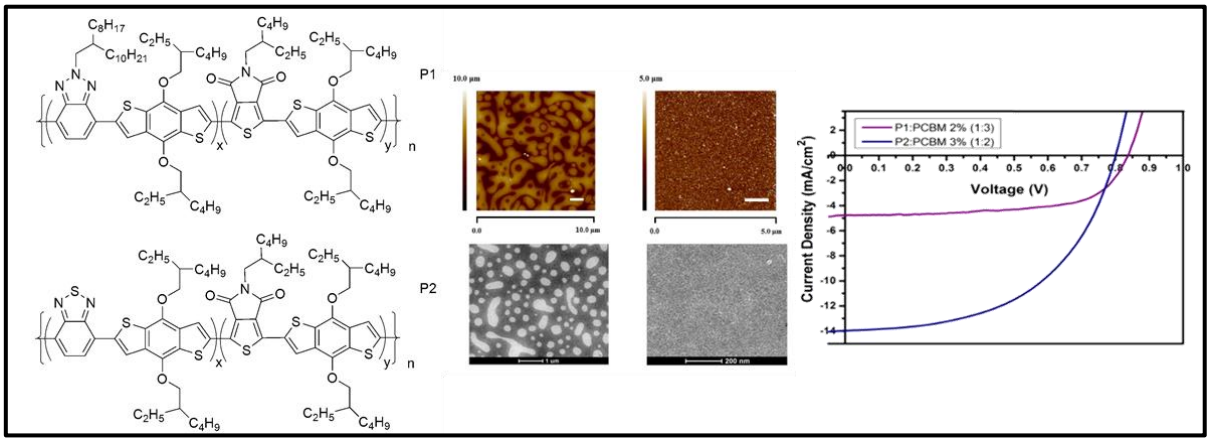


Fig.8. Efficient benzodithiophene and thienopyrroledione-containing random polymers for photovoltaics.[7]

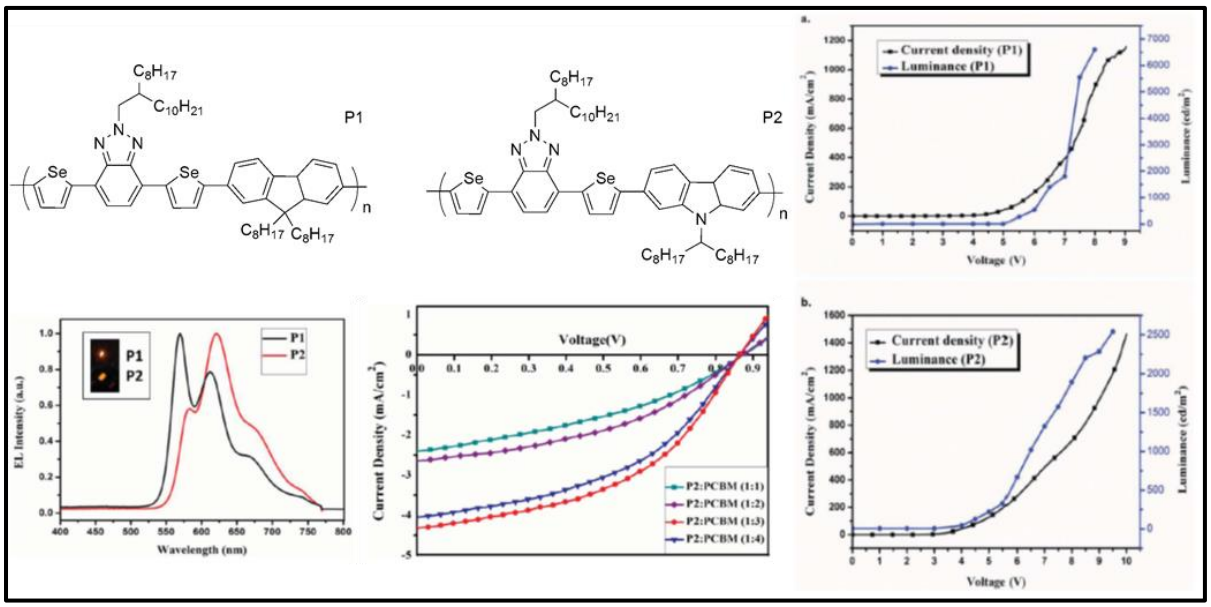


Fig.9. Multipurpose selenophene-containing conjugated polymers for optoelectronic applications[8]

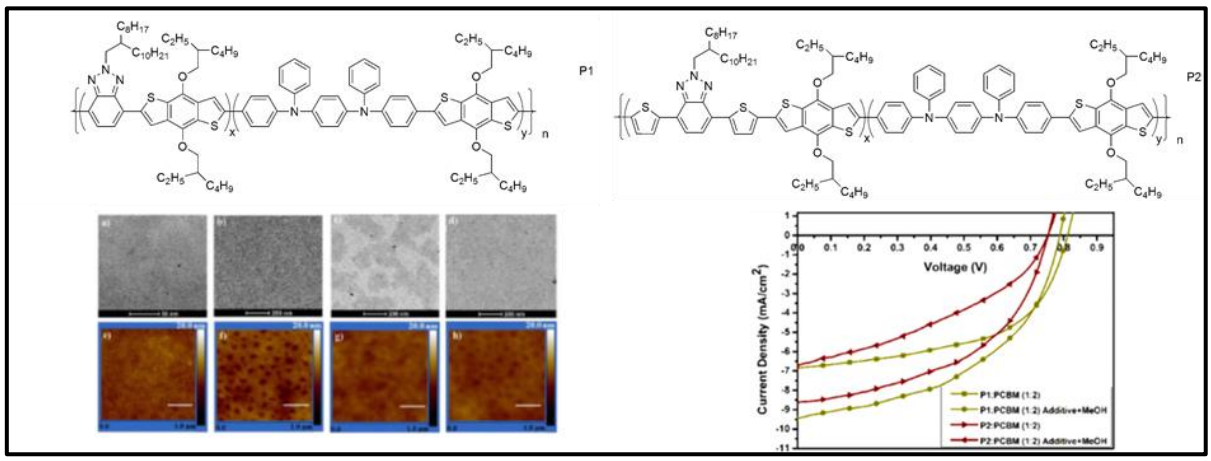


Fig.10. Bistriphenylamine- and benzodithiophene-based random conjugated polymers for organic photovoltaic applications[9]

References

1. Cevher, S. C. *et al.* Fused structures in the polymer backbone to investigate the photovoltaic and electrochromic properties of donor-acceptor-type conjugated polymers. *J. Polym. Sci. Part A Polym. Chem.* **51**, 1933–1941 (2013).
2. Yuksel, R., Cevher, S. C., Cirpan, A., Toppare, L. & Unalan, H. E. All-Organic Electrochromic Supercapacitor Electrodes. *J. Electrochem. Soc.* **162**, A2805–A2810 (2015).
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