

# Memorandum of Understanding (MoU)

between

College of Chemistry and Chemical Engineering

**Henan University, Kaifeng, China**



&

Department of Physics

**Raje Ramrao College, Jath, India**



## **College of Chemistry and Chemical Engineering, Henan University, Kaifeng, China**

The College of Chemistry and Chemical Engineering of Henan University is one of the earlier and largest departments of Henan University, founded in 1923 and rebuilt in 1959 when it was called the Department of Chemistry. In 1985, the Engineering department was established. In 1989, it was renamed the Department of Chemistry and Chemical Engineering. In 1995, it changed its name into the College of Chemistry and Chemical Engineering. The College now has a teaching staff of 128. Among them are 27 full professors, 58 associate professors, 1 Special allowance recipient of the state council, 1 excellent expert in Henan province, 1 specially appointed professor in Henan province, 5 specially appointed professors at Henan University, 13 doctoral supervisors, 78 master's supervisors and 67 teachers with a doctor's degree. The College has three faculties of Chemistry, Chemical Engineering and Materials offering four undergraduate majors in chemistry, applied chemistry, materials chemistry, chemical engineering and technology. Among these majors, chemistry constitutes the national characteristic major, applied chemistry is the characteristic major in Henan Province and chemical engineering and technology is the reform pilot program of engineering education personnel training mode in Henan. The discipline group of nano-materials and devices is the dominant discipline in Henan Province. The College has also a post-doctoral research station of chemistry and doctorate authorization of chemistry in the primary discipline. There are three primary master's degree programs in chemistry, chemical engineering and technology, material science and engineering, and professional master's degree in subject teaching (chemistry). Currently, the College has a total of 848 undergraduates, 229 postgraduate students and doctoral students.

Relying on the school, the scientific research institutions at the provincial level or above have been established, including the National Joint Engineering Research Center for Applied Technology of nano-hybrid materials, the Key Laboratory of multi-acidification in Henan Province, the Key Laboratory of natural medicine and immune engineering in Henan Province, the Engineering Research Center of the Ministry of education for energy saving and resistance reducing additives, Henan nano-materials Engineering Technology Research Center, Henan Engineering Laboratory of Fire retardant and functional materials, the Key Laboratory of pollution control and waste recycling in universities in Henan Province, and Henan Industrial Cooling Water Recycling Engineering Technology Research Center. The academic journal published by it Chemical Research is the core journal in China's science and technology. At present, laboratories cover an area of 30,000 square metres, possessing huge numbers of sophisticated instruments and characterization techniques. The total value of the instruments and equipment above 100 thousand is 42 million yuan.

In recent years, the employment rate of graduates has been above 96% and the admission rate of students taking entrance examination for postgraduate schools has been up to about 50%. In the past five years, the College has undertaken 43 national natural science funds and 75 provincial and ministerial projects. 1107 academic papers have been published in journals at home and abroad, including 604 in SCI and EI. The College has completed 7 articles and books, 20-plus authorized patents and 149 awards of research achievements. It also pays attention to academic exchanges and cooperation and has established a good cooperation relationship with many famous universities, research institutes and well-known enterprises at home and abroad. Many world-noted scholars have given lectures here. Every year teachers are sent to study abroad. Looking ahead, the College will continue to carry forward its fine traditions, strive for innovation, and move towards the goal of building a high level research-based one.

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## **Department of Physics, Raje Ramrao College, Jath, India**

**(Affiliated to Shivaji University, Kolhapur)**

Raje Ramrao College, Jath was established in June 1969. Later in 1989, Science wing was added to this college and the department of physics was established on the same year. Shrimant Vijaysinharaje Ramrao Dafale, heir of the pre-Independence Jath Princely state, donated 23 acres of land to Shri Swami Vivekanand Shikshan Sanstha for opening the college to benefit the students, especially girl's students coming from 125 odd villages of Jath Tehsil. Late Dr. Bapuji Salunkhe established Shri Swami Vivekanand Shikshan Sanstha with the motto "Dissemination of Education for Knowledge, Science and Culture". This year college is celebrating its Golden Jubilee year. Raje Ramrao College, Jath is affiliated to Shivaji University, Kolhapur, India. It is in remote, rural and drought prone area of Sangli district. The college, right from its inception has shown academic excellence and students have won meritorious awards and have maintained top ranks in the university examinations as well as in extra-curricular activities. Total 15 disciplines are taught in the college in Arts, Commerce, Science and Computer Application streams with the current student strength of around 3500. College has total 52 teaching staff and 20 non-teaching staff.

The major goal of the college is to provide widest choice of subjects to the students and for that college has started various courses as per the future needs of the country. The college offers 13 subjects at principal level. The college has M.Sc. in Physics and Chemistry and Ph.D. Course in Physics. The college has signed International MoU with Tokyo University of Science (TUS), Japan in December 2016. Since last two years, the faculty and researchers from TUS, Japan and Shahjalal University of Science and Technology, Sylhet, Bangladesh are visiting to our institute for research. Also, our faculty and students are visiting TUS, Japan through the MoU and Sakura Exchange Programme. Recently, 01 major and 05 minor research projects have been granted by University Grant Commission (UGC), New Delhi, India and 16 new MRP's have been submitted to UGC. We have highly qualified staff and well equipped research laboratories. Every year the college organizes International Conferences in different research areas. The scientists from various countries visit our institute during these conferences. Many of our alumni students are working as post-doctoral researchers in the research institutes and universities in South Korea, China, Taiwan, Europe and USA.

### **Major Research Projects in RRC**

**Self-cleaning Research Laboratory:** Dr. Sanjay S. Lathe is leading this research group. He and his research group is developing superhydrophobic as well as superhydrophilic coatings for self-cleaning applications. Also his group is engaged in preparing the anti-icing coatings and oil-water separation membranes.

**Ferroelectric and Dielectric Materials Group:** A group headed by Dr. Shrikant Kokare is synthesizing the novel materials for microwave applications. Looking to the hazardous nature of lead, the main thrust is searching for new non-lead based materials which are compatible to lead base materials.

**The period of effect for this MoU is from the date on which the latter institutions signature has been executed to March 31, 2024.**

# Memorandum of Understanding (MoU)

The authorities of College of Chemistry and Chemical Engineering, **Henan University, Kaifeng, China** and **Department of Physics, Raje Ramrao College, Jath, India** are hereby signs the Memorandum of Understanding (MoU) between these two institute on basis of following term of references.

## Term of References (TOR)

- 1. Faculty Exchange:** Mutual transfer of teaching faculty under the faculty exchange programme as and when required by the mutual consents of both the institutes.
- 2. Student Exchange:** Exchange of meritorious students on the basis of academic and culture. Student may be exchanged for the purpose of research for their post graduate course, doctoral work or post-doctoral work depending upon the need and availability of both institutes.
- 3. Collaborative Research:** A Research in the field of science and technology will be carried out in collaboration with mutual consents of both the institutes.

College of Chemistry and Chemical Engineering  
Henan University, Kaifeng, China



 27/12/2018  
Raje Ramrao College, Jath

(affiliated to Shivaji University, Kolhapur, India)

**I/c Principal**  
**Raje Ramrao Mahavidyalaya**  
**Jath, Dist. Sangali.**

DATE: 25.10.2018